S. HRG. 100-296, PT. 3

DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, EDUCATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

HEARINGS
BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
ONE HUNDREDTH CONGRESS
FIRST SESSION
ON
H.R. 3058

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES, FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1988, AND FOR OTHER PURPOSES

Part 3—(Pages 1–942)

Nondepartmental witnesses

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CONTENTS

MONDAY, MAY 4, 1987

Page

Nondepartmental witnesses.......... 1

TUESDAY, MAY 5, 1987

Nondepartmental witnesses.......... 215

WEDNESDAY, MAY 6, 1987

Nondepartmental witnesses.......... 609

DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

MONDAY, MAY 4, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:15 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Daniel K. Inouye presiding.

Present: Senator Inouye.

NONDEPARTMENTAL WITNESSES

STATEMENT OF MYRON "PINKY" THOMPSON, KAMEHAMEHA SCHOOLS BISHOP ESTATE

Senator INOUYE. This morning the subcommittee will receive testimony from several distinguished citizens from the State of Hawaii. Our first witness is Mr. Myron Thompson, trustee of the Kamehameha School District.

Needless to say, there is much interest in many programs under the jurisdiction of this Subcommittee of Labor, Health and Human Services, and in view of the large number of witnesses we have had to request that statements be as brief as possible. I will not, however, ask for the lights to be put on because I think they are very distracting. If it takes you more than the allotted time, please proceed with that.

Our several witnesses from Hawaii have come a great distance to be here this morning, and I want to welcome all of you. The committee looks forward to your testimony.

So, Pinky, it is your show.

Mr. THOMPSON. I will be brief. My complete testimony has been submitted to the committee. Good morning, Chairman Inouye and members of the committee. I am here for four reasons:

First, to thank you and the committee, particularly Senator Weicker, for their continuing support of native Hawaiian maternal child health centers;

Second, to update the committee on progress since last May's hearings;

Third, to ask for continuing support of the committee in maintaining the partnership between the Kamehameha schools and the Federal Government; and

Fourth, to let you know that due to your support, the knowledge base of early intervention has been broadened, particularly in regards to programs which are culturally compatible. This information will be shared at the forthcoming Surgeon General's Conference as well as the National Home Visitors Conference you are sponsoring through the Maternal Child Health Division of the Department of Health and Human Services. Recommendations from this conference will have direct relevance to policy regarding Public Law 99-457.

As to our progress, we know more about native Hawaiian children ages 0 to 5. For example, over 85 percent of our preschool children suffer hearing losses significant enough to interfere with their learning.

Two, the assessment of relevant resources available for 0- to 5-year old children and their families is complete. The assessment of community-felt needs is in its final stages.

Three, we have expanded programs and established new ones with strong endorsement from State and Federal agencies, other private organizations, and local communities.

Four, there is still momentum from the Networking Conference funded by the committee last year.

In summary, Senator, we have made good progress. Our goals outlined in our grant proposal are being met. Your committee is responsible for making possible the gathering of the indepth data we now have and which have been submitted.

In short, the needs are still present. It is our conviction that prevention is the most cost effective for individuals and our society. In Weikart's studies in 1978 and the GAO report of 1979, data shows that early intervention reduces the need for costly remedial services.

In addition, Kaiser Foundation recently reported that 67 percent of all disease entities and premature deaths are in fact potentially preventable. It is also significant that Secretary of Education Bennett in recent articles suggests that Federal policy should be concerned primarily in strengthening the role of the family in the nurture and protection of the child. That is one of our primary objectives of all the programs we have outlined.

My colleagues and I recommend that our institution maintain our partnership with you to fund four comprehensive child development centers over a 5-year period. After 5 years, we will evaluate our progress. Funds would allow for four comprehensive 0 to 5 centers serving a total of 150 children.

In conclusion, please join us again in funding native Hawaiian child development centers for the next 5 years. The total Federal cost will be $5 million. Our contribution will be $8.5 million.

PREPARED STATEMENT

Thank you again for this opportunity to share information with you.
[The statement follows:]

STATEMENT OF MYRON B. THOMPSON

Good Morning, Senator Inouye. I am pleased to be able to testify before you as you chair this committee for Senator Chiles. First may I thank you, and all members of the committee, particularly Senator Weicker, for past and continuing support of Native Hawaiian early childhood preventive programs; programs which will lead to the self-sufficiency Native Hawaiians desire.

Allow me to update you about the progress of these programs since I last appeared before you in May of 1986.

HIGHLIGHTS OF OUR PROGRESS ARE AS FOLLOWS:

. Programs funded with your help are providing an excellent knowledge base for continuing and building better programs. We have learned much about Native Hawaiian childrens' risk factors. While some information is bad news, it provides us with concrete data with which to work.

For example, we now provide routine hearing screening of preschool children through a cooperative agreement. It is part of our commitment to network existing services of public and private agencies. This cooperative effort enabled us to discover that over 50% of the children who enter our own 4 - 5 year old preschool programs suffer hearing losses significant enough to interfere with learning. We are discovering what the causes may be, and are confident this knowledge will eventually allow us to prevent future problems.

. Your support has allowed us to expand and improve existing pre- and peri-natal programs.

For example, we have moved our Windward area parent-infant Kupulani program to the grounds of a community (Kahuku) hospital. This is a significant step in establishing networks of services within reasonable if not immediate proximity.

Our Ulupono 4 year old demonstration preschool program has been in operation for over a year now, continuing to provide an optimum environment for curriculum development and research.

. Your support has also allowed us to proceed with the development of new sites for early childhood programs.

We reported to you last year that we felt it imperative to revamp an existing State home-based program on the Waianae (leeward) coast of Oahu, the main island, for developmentally delayed and at-risk children. We wanted to make it a center-based program for children aged 0 - 5 with comprehensive family services in three areas; a 0 - 3 program, a travelling preschool for 3 year olds, and a center based preschool for 4 year olds.

The age 0 - 3 Kupulani portion is now well underway.

- Home Visitors have been hired and trained,

- Excellent ties with existing social service agencies have been developed,
- A private pediatrician has been brought on as consultant,
- Our knowledge of this leeward area is increased tremendously, allowing us to better assist children and families, and provide services in keeping with the specific needs of the area,
- We have received strong endorsement from the state Maternal Child Health office, the Hawaii Chapter of the American Academy of Pediatricians, which represent the private sector of pediatricians, and the Maternal Child Health Office of the Department of Health and Human Services in Washington, D.C.

Additional funding by you will bring the 0 through age 3 Kupulani components to full-scale by February 1988, while our institution has committed funding to support the programs through age 5.

We have also embarked upon a neighbor island program; targeting one of the more rural, outer island areas.

Again, a cooperative venture is the basis for this program. The Kona Adolescent Family Life Project now has a contractual agreement with us, and together we are assisting pregnant teens gain access to comprehensive services available through us and others - a Kupulani type of program.

. We are also pleased to report that the needs assessment of existing resources is complete. In its last stages is the comprehensive assessment of felt needs of the 0 - 5 Hawaiian population statewide. Funding by your committee will allow finalization of this study.

. Last year I reported on the momemtum created by the statewide networking conference which you funded. The momentum has not waned. We are pleased with the progress of networks at our Waianae, Kona and Ulupono sites and believe that broader sharing of information can have an impact upon other areas of need.

- One specific example of our efforts in this regard is taking place at the Kapiolani Women's and Children's Medical Center. In operation there is an excellent model for effective early childhood health care, called the Healthy Start/Medical Home Model. We are now working closely with the pediatrician who has developed this model, and feel that it along with other usable models throughout the nation can be shared at the national level. I'll explain further below.

SUMMARY OF PROGRESS

In summary, Senators, we are pleased with the developments over the year. Our goals outlined in our grant proposals are being met. In consultation with the Maternal Child Health Division of the Department of Health and Human Services, we have made some changes in our long-range plans which I will share with you later. Communications with this department are frequent and supportive.

BRIEF REVIEW OF NEEDS

Native Hawaiians continue to suffer severe preschool health and education needs. The latest data available reveal that over 67% of the children tested in the public schools at Kindergarten entry score in the lowest stanines. (The national norm is 23%.) Risk factors are known to start at birth. These early risk factors are clearly evident in the Native Hawaiian population. While Native Hawaiians comprise only about 20% of the population statewide, thirty-one percent of all low birthweight babies are Hawaiian; and forty-two percent of all teenage mothers are Hawaiian.

Subsequent problems found in school age children and adults are well documented and have been presented to your committee several times. In short, Hawaiians remain strangers in their own land. Of the major ethnic groups, Hawaiians score the lowest educationally, have the lowest per capita income, have the highest mortality rate, have the lowest representation in professional fields. The assessment of the educational and health status of Native Hawaiians is on-going, and the information invaluable to our success. I thank your committee again for mandating the Native Hawaiian Educational Assessment Project in 1981.

PROPOSED PLANS

I continue to strongly believe that early intervention and prevention is the most cost-effective both for the individual children and society-at-large. There is much evidence of the efficacy of early intervention and growing support for "starting early." As you have said, Senator Inouye, we spend proportionately very little of our economic resources on prevention activities in spite of our knowledge that it can work. However, you and your committee have been at the forefront in promoting prevention, and I commend you for your efforts.

Your commitment to prevention has solid early support. In 1979, the Comptroller General of the General Accounting Office reported to Congress that early childhood and family development programs improve the quality of life for low-income families. The report was an evaluation of the Child Family Resource Program demonstration projects being funded by the federal government. The evaluation showed that these programs can result in reduced health, social, and educational problems in young children that are expensive and difficult to overcome in later years. It was so positively enthusiastic that the GAO recommended to Congress that these demonstration projects be used as prototypes for future child development program legislation (GAO, 1979).

Our Kupulani programs are based on this model, and as mentioned earlier, we are happy to report that the Maternal Child Health office of the Department of Health and Human Services strongly endorse and support our efforts.

Another study of the long-term outcomes of special preschool programs was done by High/Scope of Ypsilanti, Michigan (Weber, Foster, & Weikart, 1978) and results indicated that later special education and grade-level retention for former preschoolers was reduced, more than offsetting the initial costs for the preschool program itself.

A longitudinal study of the children of Kaua'i (Werner & Smith, 1977) indicates that for even high risk infants, a supportive and educationally rich home environment is the best predictor of later school success.

Recently in the Atlanta Constitution, a major newspaper in Atlanta, Georgia, where crime is inordinately high, the lead editorial was entitled "How to Head Off the Crime Wave." The major recommendation was to "start at the beginning, with tiny children." (Atlanta Constitution, March 10, 1987, Atlanta, Georgia.)

Also recently established was the Henry J. Kaiser Family Foundation Community Health Promotion Grant Program. In announcing the establishment of this program, it was noted that 67% of all disease entities and premature deaths are in fact potentially preventable.

The fact is that more preventive programs will lead to fewer remedial programs.

The development of early childhood programs, which we now call Native Hawaiian Child Development Centers, continue, therefore, to be the most viable and cost-effective solution. In this regard, my colleagues and I have recommended that our institution maintain our partnership with the federal government in funding four fully comprehensive Child Development Centers over the next five years. This is somewhat different than our long-range plans set out before you last year. In consultation with the Maternal Child Health Division, we have altered the magnitude of our plans to be more realistic and careful. Rather than proceeding immediately with our ten-year plan for eleven centers, we would like, after five years, to evaluate progress.

We are committed to contribute approximately $1.7 million annually over the next four years to bring the centers to full capacity, while we hope the federal government, through appropriations of your committee, will contribute $1 million annually.

Operationally, you would be funding the majority of the age 0 - 3 portion of the programs, and we would fund those programs serving children up to age 5. When fully operational, these centers would serve 1,250 children annually.

These plans would allow for the following:

- The demonstration Ulupono operation on the Kamehameha campus will add Kupulani and travelling preschool programs to the existing preschool for four-year olds.

- At the Kupulani sites in three major Hawaiian areas:
  - on the windward coast in Kahuku,
  - on the leeward coast in Waianae,
  - and on the island of Hawaii at the Kona Adolescent Family Life Project, expansion will be completed so all will include travelling and center-based preschools.

Thus, four Native Hawaiian Child Development Centers in high concentration Hawaiian areas would be in full swing, serving 0 -5 year olds and their families by providing comprehensive preventive health, educational, and social services.

CONCLUSION

I ask that your committee give consideration to our request to assist in funding Native Hawaiian Child Development Centers for the next four years. The total cost to you will be $4 million, our contribution will be approximately $6.8 million.

I also request that the committee give special consideration to an effort of national significance by directing the Maternal Child Health Division of the Department of Health and Human Services to sponsor the dissemination of valuable information in early childhood programs. Sharing of successful models developed by us and others would have tremendous impact at a national level. It would nurture the further development of effective, integrated models for the prevention of developmental delays in at-risk children, a relatively new field. In a recent review of the research on parent education and support programs, Powell reports that much more needs to be learned, for example, how to match program content and structure to the needs and characteristics of parents. He notes that the "rapid growth in numbers of programs must be accompanied by an informed interest in and a committeed search for the characteristics of quality programs" (Young Children, March 1986).

Thus, included in our latest grant application which your appropriation would fund, is provision for a national home visitor conference to be sponsored by the Maternal Child Health Division with other organizations such as the Kamehameha Schools/Bishop Estate as host. Participants will be the most prominent leaders throughout our nation in the field of home visiting and other persons who have developed workable models for early childhood preventive programs.

We, at Kamehameha Schools/Bishop Estate, stand ready to do our part in this important challenge to prevent long-term problems through early programs for the at-risk in our nation.

Thank you for this opportunity to share information with you.

Senator INOUYE. I thank you very much for your contribution this morning.

It is a stunning revelation your study has made, a set of statistics which indicates that at the present time over 80 percent of native Hawaiian children at the preschool age suffer from hearing losses. We have never come across statistics as devastating as this, but as a result of your study I am certainly well aware that Gallaudet University, the world's most foremost school for the deaf, will be establishing a branch campus at the University of Hawaii to teach our teachers how to recognize and identify those who are experiencing hearing losses and to teach them about the techniques of teaching the deaf.

So your studies have already had some effect. I hope as a result of these studies we will be able to effectively cope with this deafness problem.

I have also as chairman of the Indian Affairs Committee directed the Indian Health Service to do a similar survey on the reservations, and the initial results seem to indicate that Indian children also are suffering heavy hearing losses. Apparently, there is some correlation between the very poor and hearing losses.

For a long time we have been suggesting that for the children who are slow in school, deafness could have played some part in this. So I would like to commend your organization for having taken the lead in this area.

Mr. THOMPSON. Thank you very much, Senator. We will be involved with the University of Hawaii hearing program. The statistics were striking to us, also.

Senator INOUYE. We look forward to continuing our working relationship. Thank you very much.

STATEMENT OF JERROLD M. MICHAEL, Sc.D., PH.D., DEAN AND PROFESSOR OF PUBLIC HEALTH, UNIVERSITY OF HAWAII

Senator INOUYE. Our next witness is the dean of the School of Public Health for the University of Hawaii, Dr. Jerrold Michael. Dr. Michael, welcome.

Dr. MICHAEL. Senator, it is an honor to be here. I will be testifying on behalf of the School of Public Health for a portion of the testimony, and for certain portions for all the schools of public health in the United States.

To begin with, some issues related to the University of Hawaii. As you well know, Senator, in fiscal year 1983, mainly because of your help and that of Senator Weicker, there was requested of the Public Health Service a survey of the jurisdictions in the Pacific with a special relationship to the United States.

That survey, completed in 1984 utilizing the University of Hawaii's School of Medicine, Nursing and Public Health, set out a series of steps for issues that need to be addressed in order to improve the deplorable health conditions in those territories.

Again, as a result of your specific efforts in this committee, Congress appropriated $1.5 million in the current year to initiate a series of actions to address at least in beginning fashion some of those issues. The University of Hawaii School of Public Health, in collaboration with the Pacific Island jurisdictions and the Waianae Comprehensive Health Center and our community colleges are preparing two pilot programs as, of course, also the school of nursing and school of medicine are.

One proposal will improve the health data system, and the second will begin a series of technological training activities in facilities maintenance, laboratory technology and radiologic technology that are appropriate to the jurisdictions.

This, of course, is only a beginning, Senator. I and others urge you to use your specific energies to see to it that those funds do continue.

Now, in a complementary move our Governor, John Waihee, has announced a Pacific initiative that will be statewide. He has called it Pacific Health Promotion and Development Center. The mission of that center is to identify and apply and develop resources of the state in general for practical solutions to the health problems of the Pacific. That center, planned and managed jointly by the university and State department of health, will attempt to utilize the resources of the private sector and certainly the university and the Federal Government in a series of complementary activities.

Now, I relate this. It is not that you do not know it, Senator. You know it very well. For the record, the interest of Hawaii in the Pacific basin is not a transitory one or one that is confined to the university. We have in general long seen the need for continuing ongoing efforts in the area, and we urge the committee certainly to continue the funding for the Pacific basin initiative, knowing that there will be other initiatives from the State, particularly from the private sector, that will complement that.

One issue of importance, Senator, relates to funding for international centers for health promotion and disease prevention. You know very well that the focus of our school among the 24 schools of public health has exclusively related to international health and cross-cultural health.

When in 1984 Public Law 98-551 authorized the establishment of health promotion centers, the three centers were established. Unfortunately, in spite of a specific dialog and a colloquy between you and Senator Kennedy, a center for international health was not funded. We are hopeful that in the current call for proposals that there will be some specific indication for an international center to be funded and that due consideration to the University of Hawaii's special capacity to serve will take place.

It is my understanding, Senator, that the RFP, which should have been released by now, is held up in OMB, and I am hopeful that this will not become a maneuver to frustrate the intent of the Congress.

Senator, in my testimony I mentioned support for the World Health Organization. While I know that it is not within the purview of this committee, I did want to underline the importance of the United States not forgetting its obligation to the World Health body, particularly in view of the world concern for AIDS and the important role the World Health Organization will play.

Finally, Senator, in terms of Federal support for schools of public health, as you well know that has been in force since 1956. The enrollment of all schools of public health this fall will be approximately 9,500 people, but in view of the Department of Health and Human Services' assessment, there will still be major shortages of public health professionals.

I suggest that the continued support of the Federal Government for public health schools is imperative, and that includes institutional support at $5 million, student traineeships at $3 million, preventive medicine residencies at $1.6 million, and, as I have mentioned, the health promotion centers at $5 million.

Finally, Senator, a moment of personal privilege. I want to let you know how proud all of us in the State of Hawaii are of the work that you have done, certainly in the health field and in addition in worldwide efforts in general. We are pleased that you represent us so well in the State.

Thank you, Senator.

Senator INOUYE. I thank you very much, Dr. Michael, especially for your kind words.

Very often my colleagues look upon our involvement in the Pacific as strictly part of our parochial interests, so that is part of our patronage. I would hope that we realize the importance of the Pacific if not for health purposes at least for geopolitical purposes.

It may interest some of our fellow Americans to know that because of our relative lack of interest in that area the Soviets are now showing intense interest, and they have recently entered into fishing agreements with several of these new nations in bringing them fishing trawlers filled with communication devices.

I would hope that we open our eyes to this new development in that area. The investment that we will make in health and hopefully in returned friendship is a small one, and I can assure you as one member of this committee everything will be done to achieve that end.

I thank you very much.

PREPARED STATEMENT

We will insert your prepared statement in the record at this point.

[The statement follows:]

STATEMENT OF JERROLD M. MICHAEL

Mr. Chairman and Members of the Subcommittee, I am Dr. Jerrold Michael, Dean of the University of Hawaii's School of Public Health and a past President of the Association of Schools of Public Health. I am specifically testifying on behalf of the University of Hawaii's School of Public Health for certain sections of this testimony and for others, I will be presenting testimony for all U.S. schools of public health.

I would like to comment on several areas of concern to the field of public health. The first two relate to the University of Hawaii School of Public Health's involvement in health programs in the Pacific Basin and the development of Hawaii as an International Center for Health Promotion. The other two items are of broad concern to public health; namely, a need for the United States to provide support for the World Health Organization and Federal appropriations for institutional support and student traineeships or fellowships for schools of public health.

U.S. PACIFIC BASIN INITIATIVES

Let me begin with several matters related specifically to our own University of Hawaii.

In the fiscal year 1983 Public Law 97-276 directed the Department of Health and Human Services to develop a report on health services in the six U.S. Pacific Jurisdictions. The purpose of this report was to provide a framework which would assist Federal policymakers in management, organization, and development of health and health-related programs in that area. The report was completed in 1984 by the U.S. Public Health Service utilizing the combined expertise of the University of Hawaii's Schools of Medicine, Nursing, and Public Health. The PHS report to Congress presented the health needs of the six jurisdictions and also identified steps designed to build local capacity and address targeted health deficiences.

As a result of this report and as a result of the specific efforts of Senator Inouye, the Congress appropriated $1.5 million for the current year to initiate action to address Pacific Basin health problems. The University of Hawaii's School of Public Health in collaboration with the Pacific Island jurisdictions is developing a response to the DHHS call for proposals, so indeed are the Schools of Medicine and Nursing of the University and, of course, the Pacific entities themselves.

The School of Public Health in consort with our University of Hawaii community college system and the Waianae Coast Comprehensive Health Center is preparing two pilot programs.

One proposal would improve the health data system for the Region by establishing and strengthening the production, analysis, and reporting system for health data in the Pacific. Through such a system the information necessary for understanding, controlling, and preventing adverse health problems can be provided. We also project that the enhancement of the health data systems will contribute to the Pacific Islands' capacities to plan, manage, and evaluate health services and establish appropriate health policy.

The other proposal aims to improve the effective operation of the health delivery system in the Pacific entities by providing targeted short-term training in preventive facilities maintenance, laboratory technology, and radiologic technology appropriate to the needs and resources of those jurisdictions.

Both of these proposals carry with them the premise that the needs for training and improved data capability are shared by all the island entities but their exact nature will vary from jurisdiction to jurisdiction. Active participation by local jurisdictions occurring throughout the development process will ensure that results of the proposals will be sensitive and responsive to regional similarities and individual differences.

In a complementary move our Governor, John Waihee, announced recently an innovative Pacific initiative through the development and operation of a Pacific Health Promotion and Development Center in Hawaii. The mission of this Center would be the identification, application, and development of practical solutions to health care problems of the Pacific.

Programs at the Center, planned and managed jointly by the University of Hawaii and the State Department of Health with major help from the private sector, the Federal government, and all state agencies, would include training, consultation, strategic and tactical health planning, demonstration programs, and exchange programs.

I relate this to you to emphasize that the interest in Hawaii for Pacific Basin health problems is not a transitory one or one confined to the University. We have long seen the need for coordinated ongoing efforts in this area and urge this Committee to continue funding for Pacific Basin initiatives.

INTERNATIONAL CENTER FOR HEALTH PROMOTION AND DISEASE PREVENTION

The University of Hawaii's School of Public Health has had a long history of activity in the Pacific Basin. Since its inception, the School has concentrated its interest on international and global health problems. The School's mission addresses itself to cultural and transnational aspects of public health. Our academic, research, and service objectives emphasize the application of public health knowledge in international and domestic settings where multi-ethnic and multicultural populations predominate. One practical illustration of how we are regarded in that area is the fact that we have just been named as a World Health Organization Collaborating Center for Leadership Development.

When the 1984 amendment of Public Law 98-551 authorized the establishment of Health Promotion and Disease Prevention Centers, the legislative language in the hearing process suggested the inclusion of one center—an international center—which would focus on collaborative prevention efforts in the Pacific Basin and Southeast Asia.

It was disappointing that while three centers were selected last year, an international center was not so identified. We are hopeful that this year's call for proposals for the Health Promotion

Centers will specifically include such an international center and give due consideration to the University of Hawaii's capacity to so serve.

In this age of escalating medical costs it is no longer necessary to argue the fiscal logic of promoting health to prevent disease. Although AIDS is a comparatively new health problem, it is an agonizingly explicit example of the value of prevention. The major current defense against the spread of this disease is prevention, with the primary intervention being through community education. Education, of course, is paramount in the public health discipline. The positive effects of the "Provision of Emergency Medical Services for Children" is another example of a preventive service which is of critical importance to this whole movement.

We applaud this Committee and Senator Inouye, in particular, for the foresight in establishing the initial authorization for prevention centers. Maintaining the impetus that began with the authorization is also drastically important. Health promotion and disease prevention has rightly been identified as a high national priority. We urge the Committee to reauthorize the appropriations for Centers for Health Promotion and Disease Prevention at the level of $5.0 million for FY 1988.

U.S. SUPPORT FOR THE WORLD HEALTH ORGANIZATION

As this Committee is aware, the World Health Organization is a non-political, humanitarian health agency. Since its inception in 1948, WHO has helped save the lives and improved the health of millions of people. Perhaps one of the most notable achievements is the eradication of smallpox from the planet. Besides being of benefit to the entire world, the success of this WHO program actually saves the U.S. $108 million each year because compulsory vaccinations are no longer needed, nor are the associated port of entry recordkeeping activities of the Public Health Service.

WHO has now been called upon to coordinate the global response to the AIDS crisis. This organization has the most comprehensive system for collecting and analyzing international health data. As a clearinghouse for epidemiological information and research, WHO has strengthened the capacity of all countries to protect their blood suppplies and engage in research on prevention and treatment of AIDS.

These are but two examples of WHO's activities which benefit not only the U.S. but all nations of the world. In this context it is perplexing that the U.S. has, for the first time in 38 years, failed to contribute its fair share of the annual cost of WHO's expenses. The U.S. stance has not gone unnoticed among other countries who have also deferred their payments.

At this time of worldwide crisis over the AIDS epidemic, we can ill afford to put in jeopardy one of the preemminent organizations which can respond to the international health emergency.

FEDERAL SUPPORT FOR SCHOOLS OF PUBLIC HEALTH

The final area of my testimony relates to federal support for the education of public health professionals.

The 24 accredited schools of public health have been educating health promotion and disease prevention professionals (physicians, nurses, dentists, epidemiologists, environmental health specialists, among others) since the early decades of this century. In 1956 the Hill-Rhodes Act was passed to provide federal support for the then 11 schools of public health to train personnel needed to operate the nation's public health, disease prevention, and health promotion programs. Since then, the number of schools has more than doubled and enrollmment has increased fivefold (over 9,500 are expected to enroll this September). Yet, there are still definite shortages of public health professionals today. The Department of Health and Human Services, in its Fifth Report to Congress on the Status of Health Personnel (1986), maintains that there are insufficient public health professionals prepared to cope with new and emerging public health problems of today--problems such as behavior-related disorders; work-related diseases and injuries; new and re-emerging communicable diseases including AIDS; special problems of the aged, children, migrants, immigrants and the disadvantaged; toxic waste and other environmental health problems; prevention of chronic diseases such as heart disease, cancer, stroke, premature senile dementia, among others.

The types of public health professionals who are trained in our graduate public health schools and for whom a need continues to exist include:

- o Epidemiologists knowledgeable about non-infectious diseases, new generation infectious diseases (such as AIDS, Legionnaires' disease, toxic shock syndrome), and environmental health problems.
- o Environmental health professionals skilled in toxicology, assessment of risks related to hazardous chemical and physical agents.
- o Public health nurses, public health physicians, nutritionists, biostatisticians and health educators prepared to address problems of children, the aged, and the disadvantaged.

Based on the fact that public health personnel shortages exists, we believe that continued federal support is justified. Federal support is also justified on the grounds that graduates of the schools of public health work primarily in the public sector in the areas of health promotion and disease prevention.

Because of your personal commitment to this area, Senator Inouye, I would like to also note that the University of Hawaii's School of Public Health participates in programs for minority and underserved populations. The goal of both our American Indian and Alaska Native Program and the Health Careers Opportunity Program which includes Native Hawaiians is to actively recruit minority and underrepresented individuals who, in turn, have a commitment to return to their home areas to help bring about improvements in the health of their fellow citizens.

The attached table outlines the FY 1988 requests to Congress by the Association of Schools of Public Health for HRSA academic public health programs and selected CDC programs of primary concern to the schools of public health.

Thank you, Senator Inouye, for allowing me the opportunity to present these views and to appear at this hearing today.

Mahalo nui loa.

ATTACHMENT

FY 1988 REQUESTS TO CONGRESS BY THE ASSOCIATION OF SCHOOLS OF PUBLIC HEALTH

APPROPRIATIONS (MILLIONS)

	Final FY 1984	Final FY 1985	Final FY 1986	Final FY 1987	Pres. FY 1988 Requests	FY 1988 Author.	ASPH Requests FY 1988
Institutional Support (Capitation)	$5.0	$5.0	$5.0	$5.0	0	$5.0	$5.0
Traineeships	$2.5	$3.0	$3.0	$3.0	0	$3.0	$3.0
Preventive Medicine Residencies	$1.5	$1.6	$1.6	$1.6	0	$1.6	$1.6
Centers for Health Promotion and Disease Prevention (CDC)	—	—	$1.5	$1.5	0		$5.0

STATEMENT OF TERENCE A. ROGERS, Ph.D., DEAN, JOHN A. BURNS SCHOOL OF MEDICINE, UNIVERSITY OF HAWAII AT MANOA

Senator INOUYE. Our next witness is the dean of the School of Medicine of the University of Medicine, Dr. Terence Rogers. Welcome, sir.

Dr. ROGERS. Good morning, Senator Inouye. Thank you, sir.

Mr. Chairman, I am Terence Rogers, dean of the School of Medicine at the University of Hawaii, and we share those concerns you just expressed about health care in the Pacific particularly as related to our national defense posture there.

We have an existing program funded at the initiative of this committee to train Micronesian and Samoan persons as medical officers to take care of the primary health care needs of their people for the next generation. The plan is to train a cadre of 125 medical officers in five classes of 25. Each class will be in training for 5 years, which includes 1 year internship.

This is a program with a beginning, a middle and an end. It is not the establishment of a school of medicine. The first 3 years of funding of an 8-year program came from an appropriation of $2.5 million, and this will expire at the end of 1988. We seek funding for the 3 years beginning January 1989 and request $5.17 million. Budgetary details are included in our technical testimony.

The program is being conducted in Pohnpei in the Eastern Caroline Islands by faculty of the University of Hawaii Schools of Public Health and Medicine. The first class is in full swing, and the second class will begin before the end of 1987. Except for the completion of some funded repairs to otherwise free facilities, we have what we need in the way of classrooms, laboratories, dormitories and, of course, access to the adjacent Pohnpei State Hospital.

The State of Pohnpei and the Government of the Federated States of Micronesia have been extremely cooperative, even down to details such as the provision of free facilities, the arrangement of formal leases, professional liability indemnification, et cetera.

PREPARED STATEMENT

In short, Mr. Chairman, the program is working and will provide the former teaching PI with affordable health services delivered by their own people. This request is congruent with our testimony leading to the original appropriation.

[The statement follows:]

STATEMENT OF TERENCE A. ROGERS

MEDICAL OFFICER TRAINING PROGRAM FOR THE PACIFIC BASIN

1. The Plan For Health Care in Micronesia and American Samoa
   a. The objective is to train a new cadre of about 125 Micronesian Medical Officers who will replace those retiring and replace the National Health Service Corps assignees. This will provide affordable primary care for Micronesia well into the 21st century. Micronesian health professionals will thereby take care of the Micronesians.
   b. The level of training, now underway, is at a very advanced level, which will permit the new Medical Officers to treat all but the most complex clinical problems. For example, they will be able to handle the management of trauma and obstetrical exigencies requiring surgery if in a remote location.
   c. Further, the training will include the provision of leadership in the training of other health workers, with special emphasis on maternal and child health care, and community health in general.
2. The Problem
   a. Despite the idyllic appearance of most of Micronesia, the neglected and stagnant economy leads to conditions reminiscent of the Third World, rather than those of areas under U.S. Jurisdiction. The new entities of Micronesia are poor countries and show little promise of ever being prosperous.
   b. The quality of health and health care reflects this pessimistic picture, and Micronesian hospitals are full of patients with preventable diseases, such as enteric disorders, parasitic infestations, tuberculosis, leprosy, etc. These diseases are not just preventable in the sense that lifestyle changes can prevent coronary heart disease, for example, but are preventable by classical principles of early detection and sanitation.
   c. Even though there is no outright starvation, there is extensive malnutrition, seen most urgently in infants making the transition from breast feeding to other foods, usually in consequence of the birth of a new sibling, but also throughout early childhood.
   d. At the present time a mainstay of health care delivery in Micronesia is the work of young doctors from the National Health Service Corps, paid by the U.S. Public Health Service. Most of these are fulfilling medical school scholarship obligations, which will soon end.
   e. Until recently, the mainstay of health care has been the work of Micronesian Medical Officers, trained at the Fiji School of Medicine. These men, without extensive prior formal education, were trained to a high level of competence to be, in effect, physicians. They are now middle-aged and will all retire in the next few years.
   f. The John A. Burns School of Medicine at the University of Hawaii has accepted 20 Micronesian students for the M.D. program, of whom 10 graduated and 3 went back to Micronesia. The training of Micronesian M.D.s is not a practical solution because so few of the young people have the requisite secondary educational underpinning and, for those who do, the M.D. degree is a passport to prosperity in the mainland U.S.A.
3. Progress
   a. We have a most active Advisory Board made up of the Health Directors for the participating Micronesian Governments and American Samoa. They have

contributed to, approved, and facilitated the curriculum.

b. The same Board participated in the selection of the first class of students and, in so doing, committed their governments to employ them upon graduation.

c. We have the first class in training and the next class will begin during this year (Year 2) of the present funding.

d. The requisite facilities have been leased at no cost and all of the requisite hospital affiliations, malpractice indemnification, etc., have been completed. The governments of the State of Pohnpei and of the Federated States of Micronesia have been extremely cooperative. They even built housing which is rented by our faculty.

e. In the interim, ingenuity and the personal labor of students and faculty have permitted the program to begin while repairs and renovations to teaching and dormitory facilities are being implemented.

4. Future Plans and Funding Request

a. We respectfully request three years of support beginning after the current three-year grant (January 1, 1989). We now project eight years of funding for the entire program and have already received the first three years.

b. Accordingly, we request $5.17 million to be awarded as a single three-year grant.

c. Two of the charts attached show the growth of the number of students-in-training during the total of eight years, and the concomitant budgetary requests. The "pie-chart" shows the allocation of the total costs for the three years' funding requested.

d. The table on the next page shows in more detail the budget for the three years now requested.

BUDGET FOR THREE YEAR PERIOD

CATEGORY	1	2	3	TOTAL
Faculty Salaries &	$ 671,200(7)	$ 907,200(9)	$ 740,900(7)	$2,319,300
Other Staff Salaries	231,500	242,600	254,200	728,300
Faculty & Staff Travel	80,000	100,000	80,000	260,000
Student Support & Travel	352,500	470,000	352,500	1,175,000
Other*	100,750	108,250	96,500	305,500
Total Direct Costs	1,435,950	$1,828,050	1,524,100	4,788,100
Indirect Cost (8%)	114,876	146,244	121,928	383,048
TOTAL	$1,550,826	$1,974,294	$1,646,028	$5,171,148

*Supplies, Equipment, Communications, Vehicle Operation, Shipping, Duplicating, etc.

5. Background. Distances between population centers are huge and many families on remote atolls can reach those population centers only after days of travel in small boats across the open Pacific. The indigenous cultures are strong and dignified, but they have been eroded by "modernization", and an effective administrative infrastructure has been slow in developing.

Our training program has been developed, in a spirit of optimism, by persons who are thoroughly familiar with the pessimistic scene just described. Their familiarity is the origin of several principles implicit in the program.

In Micronesia:

1. Keep it simple and it will work.
2. Keep it small and it can be managed without a non-existent cadre of managers.
3. Rely on regular transportation with Honolulu for essential equipment maintenance.
4. Teach clinical medicine which is independent of automated clinical laboratories, specialized technicians and their monitoring equipment.
5. Build a simple communications system.
6. Build a curriculum that meets the realities of both the output needs and the educational level of the student intake.

6. Nature of Program, Essentials. The plan, already implemented, is to train in Micronesia indigenous people of Micronesia and American Samoa to provide acute primary care at an advanced level, to provide preventive medical leadership and to train and supervise other health workers. We propose 5 classes of 25 students for a 4 year course (followed by 1 year of internship) utilizing 8 years (3 already funded) to produce 125 graduates. They are designated by their governments as Medical Officers (MOs).

7. Need. The program is to meet an emergent health manpower shortage resulting from the imminent retirement of the 35 remaining Medical Officers with no replacements in sight. The long-term benefits of the program are that the key health professionals will continue to be indigenous, which has extensive cultural and linguistic advantages and, perhaps most important of all, will provide a cadre of primary care health manpower which will be affordable by the relevant entities in future economic uncertainties, especially in those approaching independence. We would emphasize that we have a program, which will have an end; we do not propose the establishment of a "school".

   All of the studies, including the most recent, Health Services in U.S. Pacific Jurisdictions: 1984, have shown there is a chronic health manpower shortage throughout the region. We quote from the study.

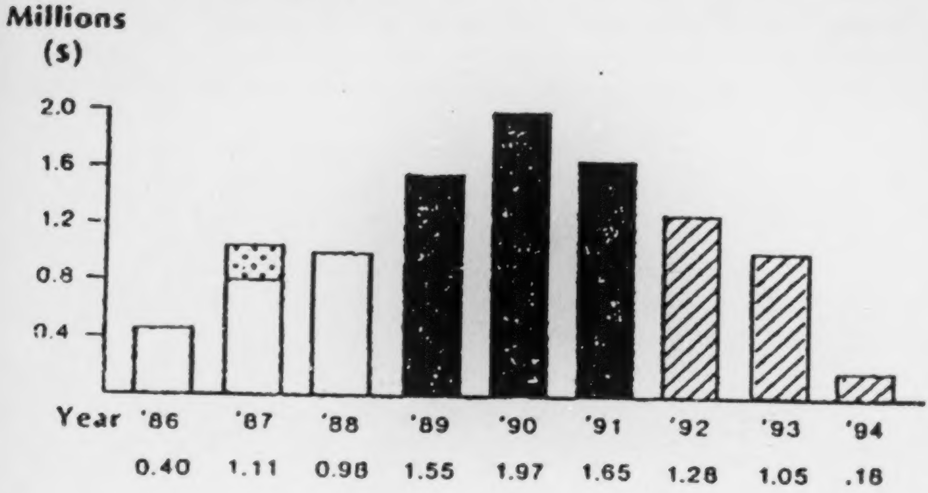
   "Only Guam and Samoa appear to minimally meet the specific criteria for physician manpower. Only Guam, in any overall sense, appears adequately staffed in all manpower categories, with serious shortfalls appearing elsewhere almost universally. Few formal manpower development plans exist to deal with this situation."

   "Because of the difficulties experienced in identifying, recruiting and training sufficient numbers of local island citizens in the health professions abroad, some mechanism will need to be found to develop indigenous health manpower within the Pacific Basin with educational programs specificially constructed and paced to the needs of island people. The mechanism must assure that the developed manpower meets the needs of the citizenry."

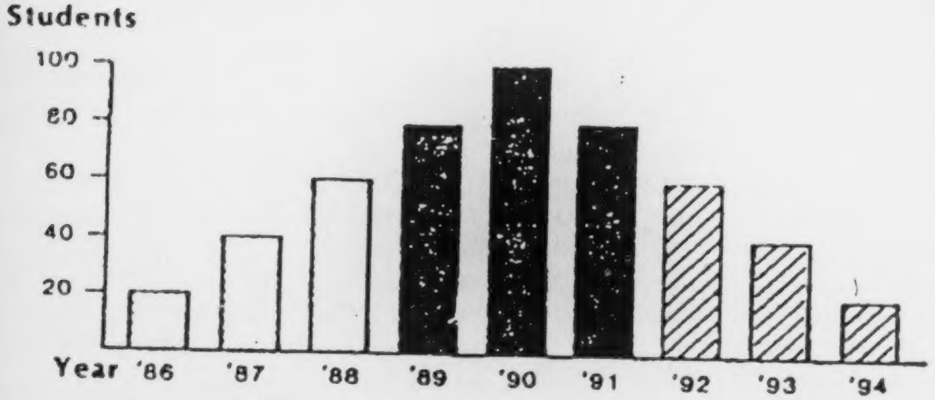
8. Current Status. The program is successfully underway with 22 students, coming from the Republic of the Marshall Islands, the Republic of Belau, and from each of the four states of the F.S.M. Instruction is rigorously supervised with daily quizzes and supervised scheduled study time, and performance to date has been excellent. Preparations for the second class are underway, and facilities are being adapted to accommodate the next class. Support from the local governments and people continues to be outstanding.

MEDICAL OFFICER TRAINING PROGRAM, POHNPEI

Cost of program in millions of dollars by year



Total numbers of students in program, by year.*



Attrition will be met by adjusting intake in subsequent year

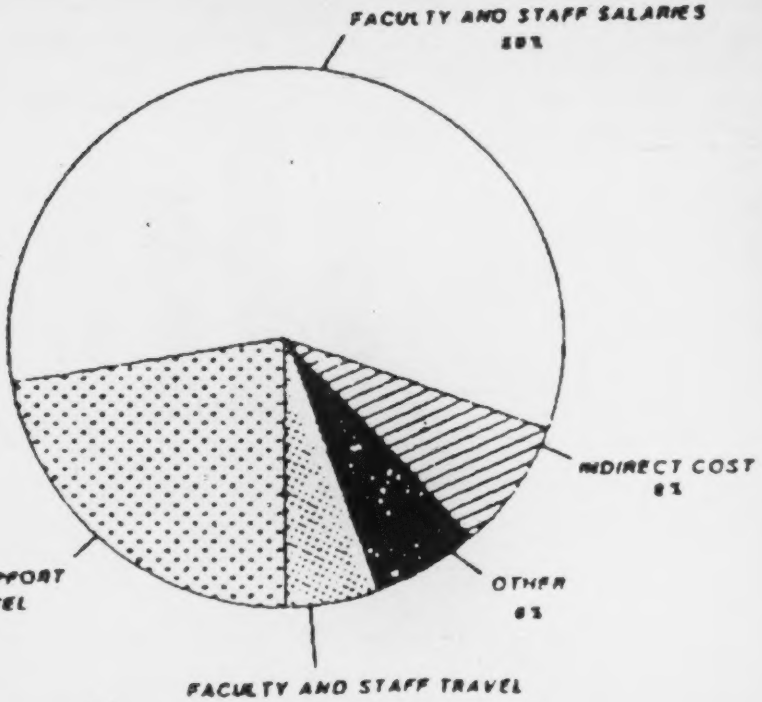
☐ *Funded by current grant*

■ *Funds in present request*

▨ *To be funded by participating governments and other sources*

⁘ *Budgeted for repairs*

Medical Officer Training Program, Pohnpei
3 year cost



Senator INOUYE. I thank you very much, Dr. Rogers.

Once again, I would like to commend your school of medicine for participating so actively in the training of personnel for Micronesia and Samoa. Most Americans have no idea where Micronesia is, but for those who fought in the Pacific during World War II, they know very well where Micronesia is and the importance of that area to the geopolitical strategy of the United States.

I just hope that the State of Hawaii can make up for what we as a nation have not been doing out there, and that is maintaining friendship. As a result, I think our national interest and national welfare has been upheld.

Have you found that since your involvement there that the health delivery system in Micronesia has improved?

Dr. ROGERS. Frankly, no, sir. We have not been there long enough.

Senator INOUYE. What would you account for the lack of progress there?

Dr. ROGERS. Mainly community health problems. The hospitals are full of people with preventable diseases. I do not mean preventable in the sense that coronary heart disease is preventable. I mean preventable in the sense of intestinal worms, leprosy, tuberculosis, et cetera.

Senator INOUYE. I note in the report that you have submitted to us that the high consequence incidence of preventable disease is way above our national average. What is being done for tuberculosis there? I ask you this because of the ready entry from there into Hawaii.

Is the incidence of tuberculosis very heavy in Micronesia?

Dr. ROGERS. Yes, sir; it is high, and, of course, we rely, with respect to immigration to Hawaii, on the usual screening of immigrants. In general, it is almost more cost effective to treat an immigrant who turns out to be tubercular after he arrives in the United States or in particular in our own State than to go in for enormously complicated proceeding testing.

I think the thrust of your question relates to the incidence in Micronesia itself. The problem there is the outreach which we hope to achieve through these trainees and those that my colleague, Dean Michael, were referring to, to see to what we call patient compliance, that there are perfectly good drugs now against tuberculosis, and with some changes of lifestyle the Micronesians can control this.

The ambition of our program is that this should be done by Micronesians.

Senator INOUYE. A recent study of preschool native Hawaiian children indicated that 84 percent of these children have hearing loss of some degree. Have you or has the Micronesian Health Service conducted similar studies among their preschool children?

Dr. ROGERS. Yes, sir, and the results are almost identical. I am pleased to say that one of our faculty who is conducting the training in Pohnpei has a grant from NICHHD, as a matter of fact, to tackle this otitis media problem throughout the Micronesian Islands. Annually, they have a big training session in which they train everyone, not just doctors and nurses and so forth but school teachers, to diagnose otitis media. We have a team of surgeons go through and clean up on all of those cases requiring surgical intervention, and we are making a dent in this.

We have excellent cooperation from the University of Guam with respect to the audiology part of the program.

Senator INOUYE. Well, I am glad to hear that the studies have been made and programs have been established. I thank you very much, sir.

Dr. ROGERS. Thank you, sir.

Senator INOUYE. Before proceeding any further, I would like to advise the witnesses that all of their prepared statements will be made part of the record in total.

PREPARED STATEMENT

Senator INOUYE. Our next witness, Mr. Kamaki Kanahele, III of the Office of Hawaiian Affairs, has submitted his statement, and without objection his statement will be made part of the record.

[The statement follows:]

STATEMENT OF KAMAKI A. KANAHELE III

Aloha Mr. Chairman and members of the Committee. The Office of Hawaiian Affairs testified before Congress last year and would like to submit this written testimony to be part of the record this year. I would like to take this opportunity to reintroduce our agency and discuss the plight of the native Hawaiians, who would be severely impacted by federal budget cuts.

THE OFFICE OF HAWAIIAN AFFAIRS

The Office of Hawaiian Affairs is governed by an elected nine-member Board of Trustees. The trustees must be of native Hawaiian descent and are elected by eligible voters who must also be of native Hawaiian ancestry. As a result, the OHA trustees are directly accountable to their beneficiaries, the native Hawaiian people.

OHA was created in 1978 by an amendment to the Hawaii State Constitution. The basis for its establishment, however, dates back to our State Admission Act of 1959. The Act created a public land trust, the proceeds of which were to be used for five purposes. One of the purposes was the betterment of conditions for native Hawaiians.

In 1979 the State Legislature passed Act 196 which established the basic structure of OHA. This act, which was subsequently codified as Chapter 10, Hawaii Revised Statutes, set out the basic purposes, powers, duties and responsibilities of OHA. For your convenience, a copy of Chapter 10 is attached as Appendix A. Chapter 10 established OHA as the "principal public agency in this State responsible for the performance, development, and coordination of programs and activities relating to native Hawaiians." Chapter 10 also mandates OHA to serve as a receptacle for reparations and to act as a clearinghouse for federal or state assistance involving Hawaiian programs and projects. OHA is also responsible for advising, informing and coordinating federal, state and county activities relating to native Hawaiian programs. It is with this role in mind that OHA submits this testimony today.

THE PLIGHT OF THE HAWAIIANS

The poor social and economic condition of native Hawaiians is well documented in numerous studies, including Volumes I and II of the Native Hawaiians Study Commission Report, the Native Hawaiian Educational Assessment Project Report and E Ola Mau, the Native Hawaiian Health Needs Study. Volumes I and II of the Native Hawaiians Study Commission Report, which was mandated by Public Law 96-565, Title III, indicate that native Hawaiians suffer significantly higher unemployment than other residents of the State; higher rates of poverty and incarceration; the highest infant mortality; the lowest life expectancy; higher incidence of cancer and alcoholism; higher rates of respiratory conditions, such as asthma; higher rates of personality disorders and mental retardation; and higher suicide rates.

The Native Hawaiian Educational Assessment Project Report, initially authorized by Congress, but funded by a private organization, finds that native Hawaiians have the highest rate of academic and behavioral problems in schools; lower academic achievement; higher participation rates in social welfare programs; lower rates of enrollment in institutions of higher learning; and higher rates of truancy and dropouts than other ethnic groups in the State.

E Ola Mau, the Native Hawaiian Health Needs Study, funded by the U. S. Department of Health and Human Services, focused on mental health, medical, nutritional and dental problems of the native Hawaiian population. It also examined the historical and cultural context of native Hawaiian health needs. In terms of mental health, the study found that native Hawaiians have higher rates of social problems, including assaultive acts and antisocial behavior; alcohol and narcotics use; child abuse and neglect; and residence in correctional institutions. The medical section of the study confirm the findings of the two reports previously mentioned. In addition, it reports that native Hawaiians have higher rates of congenital abnormalities; underweight infants; chronic diseases such as diabetes, heart disease, hypertension and cancer; teen pregnancy; illegitimate births and inadequate prenatal care. The nutrition/dental section of the study found that the native Hawaiian diet was deficient in protein, phosphorous, iron, vitamins C and A and thiamine. In addition, native Hawaiians consumed too much fats, sugars and salt. The caries attack rate in Hawaii for permanent teeth among children 6-14 years of age is one of the highest in the nation, and native Hawaiian children had one of the highest DMF (decayed, missing and filled teeth) rates.

CONCLUSION

These statistics clearly show that all is not well in "paradise." Although our climate may be idyllic, the quality of life for native Hawaiians is not. Native Hawaiians, like other native Americans, have not been able to share in the good fortune of others in their state. For example, although reports show that people who live in Hawaii (as opposed to native Hawaiians) have the longest life expectancy in the nation, this statistic does not apply to native Hawaiians, 20% of the state population, who have the highest cancer rate in the entire country (American Cancer Society, 1983). The Office of Hawaiian Affairs strongly supports federal programs to help better the condition of all native Americans who face a myriad of social, physical and economic problems. It is our hope that you have a better appreciation for the plight of the native Hawaiians and that you are able to assist us in an effort to alleviate some of the problems that we face in common with other native Americans.

Because native Hawaiians are far below State and national averages in terms of physical and socioeconomic statistics, budget cuts to federal domestic programs will worsen the condition of native Hawaiians. If anything, assistance programs should be increased to help improve the conditions of native Americans, especially native Hawaiians.

Thank you for the opportunity to present testimony to this Committee.

STATEMENT OF CRAIG DUTRA, SENIOR ADVISOR ON HUMAN SERVICES, ON BEHALF OF HON. RAYMOND FLYNN, MAYOR, BOSTON, MA

Senator INOUYE. Our next witness is a most distinguished American. He is the mayor of the city of Boston in the State of Massachusetts, the Honorable Raymond Flynn.

Welcome, Mayor Flynn.

Mr. DUTRA. First, I am not Mayor Flynn. Mr. Flynn had a last-minute scheduling conflict. I am Craig Dutra, and I am the Senior Advisor——

Senator INOUYE. You look like a mayor. [Laughter.]

Mr. DUTRA [continuing]. To Human Services. He had a last-minute scheduling conflict. Mr. Chairman, with your indulgence I would like to present his testimony at this time.

We would like to thank you for this opportunity to present the mayor's thoughts and issues for your consideration.

Five months ago during the State of the City Address, Mayor Flynn announced the formation of the Boston Youth Partnership, which is a local strategy to invest community resources into the lives and futures of the city's young people. He has sought and received the involvement of parents, children, the business community and community-based organizations to expand and develop programs for youth with the goals of reducing dropout rates, increasing the health status of the city's young people, to increase the preparedness for and access to jobs, and to provide outreach in leadership opportunities.

Throughout the country, local elected officials have acted similarly in responding to a growing national crisis which stems from disinvestment in youth occurring at the Federal level. I am here on behalf of the mayor to ask you to join Boston and other cities as partners in a national youth investment program.

The following problems and needs of youth underscore our concern.

Child poverty rates are higher now than at any time since the 1960's. In 1985, 11 million children 18 years and under had no health insurance. One outcome of rising poverty rates and poor access to health care has increases in infant mortality rates occurring in cities such as Boston. Last year we saw a 32-percent increase in our infant mortality rate.

Another area of concern of the mayor is improving educational performance and opportunities. Children from poor families many times are more likely to drop out of school than children from more affluent households. This has been true in Boston, where over 30 percent of our children live below the poverty level, and 43 percent of the children entering the ninth grade in the city of Boston fail to complete their high school education.

We are here today to ask you to increase appropriations for programs that have been proven effective in reducing infant mortality, improving school performance and reducing dropout rates and increasing job opportunities for young people.

The mayor is aware that State and local governments, particularly in those regions such as ours, which are experiencing economic growth need to do their share. I am here to tell you that in Boston, as in many other cities, we have implemented a number of creative strategies to deal with problems such as infant mortality, school dropout rates and youth unemployment.

In Boston we have doubled our commitment to next fiscal year's budget to programs seeking to reduce infant mortality. Unfortunately, in spite of a 42-percent increase in need, we will have no more funds from the Federal Government to deal with this problem than we currently have at the present budget recommendation stance.

To deal with high dropout rates, we have extended through the Boston Youth Partnership alternative education programs and reentry programs targeted to middle school students. We need the Federal Government to do more through expanded funding for chapter 1 as well as programs such as Youth 2000.

Specifically, the mayor asks your consideration of the following:

In combating infant mortality, increase funding of the maternal and child health block grant from the President's recommendation of $478 million to its authorized level of $557 million. The mayor also seeks a $30 million expansion in funds for community health centers which provide services to women and children in high risk areas.

In terms of improving educational performance, we concur with child advocates who are seeking a $500 million increase during the next fiscal year in chapter 1 of the Educational Consolidation and Improvement Act of 1981 which has proven effective at increasing the achievement level among students participating in those programs.

We urge continuation of extended funding for Federal partnerships such as the Youth 2000 initiative.

In terms of decreasing youth unemployment, the mayor supports a $200 million appropriation for summer youth programs and supports this chairman's efforts to increase training and education programs available to youth through the Job Training Partnership Act.

PREPARED STATEMENT

I would like to thank you once again for allowing me to present the mayor's testimony.

Senator INOUYE. I thank you very much, and please send our best regards to the mayor, please.

[The statement follows:]

Statement of Raymond L. Flynn

Good morning Mr. Chairman and members of the Committee. I would like to thank you for this opportunity to present my thoughts and issues for your consideration.

I'm here today to urge you to join with me and others in developing a national investment strategy for youth. Five months ago during my state of the City address I announced the formation of the Boston Youth Partnership, a local strategy to invest community resources into the lives and futures of our City's young people. I have sought and received the involvement of parents, children, the business community, and community based organizations to expand and develop programs for youth with the following goals:

1. To reduce high drop-out rates
2. To increase the health status of our young people
3. To increase their preparedness for and access to jobs
4. To provide outreach and leadership opportunities for youth
5. To increase recreational programs and facilities

Throughout the Country local elected officials have acted similarly in responding to a growing national crisis which stems from "disinvestment" in youth occuring at the federal level. Today I am asking you to rejoin Boston and other Cities as partners in a national youth investment program. The following problems and needs of youth underscore my concern:

More than 12 million children are living in families whose income is below the federal poverty line. Child poverty rates are now higher than at any other time since the 1960's. One in every five children live in female-headed, single parent households.

These children are four times more likely to be poor than those living in other family situations. In 1985, 11 million children aged 18 or younger had no health insurance. One outcome of rising poverty rates and poor access to health care is an increase in infant mortality.

Earlier this year the Children's Defense fund released a national study on Maternal and Child Health which once again reminded us that the social safety net has gaping holes when it comes to the health and welfare of this nation's children. At that time they noted that infant mortality rates in 6 of the 22 largest cities had increased during 1984. In addition to Boston, other cities registering an increase were the District of Columbia, Detroit, San Antonio, Milwaukee, and Cleveland.

That report also noted that this country had fallen to a tie for last place among the industrialized nations of the world in terms of infant mortality. In countries such as Hong Kong, Australia, Japan, and Spain infants have a greater chance of survival than those babies born in the United States. For minority Americans this situation is even more critical. In many of our nation's cities the minority infant mortality rates exceed those of a developing nation.

Infant mortality rates are widely accepted as indicators of a community's overall health and well being. Unfortunately even the City of Boston--which is distinguished internationally for its system of health care and our advanced medical commitment to combatting infant mortality was one of the six cities with an increase from 1983 to 1984. The infant mortality rates rose from 11.5 to 11.7 deaths per thousand live births.

The 1985 data for the City of Boston indicated an increase in infant mortality from 11.7 to 15.4 deaths per thousand live births--an increase of over 32%.

Low birthweights are indicators of high infant mortality rates. Inadequate nutrition and poor prenatal care are two major causes of low birthweight. While the medical profession has improved its ability to save these infants, progress towards reducing the number of low birthweights has been slow. Infants born under these conditions are 40 times more likely to die within the first year of life. Early pre-natal care can reduce the incidence of low birthweights by as much as two-thirds.

Several programs under the jurisidiction of this committee extend pre-natal care to women who are at risk for low birth weights. Today I respectfully request that you increase expenditures for these programs so that this country can set infant mortality rates back into decline.

One program that provides care to pregnant women and their infants is the "Maternal and Child Health Block Grant". Currently the program is funded at $478 million with the President seeking no increases in his budget for next year. I urge the committee to consider an appropriation for this program for next year at its authorized level of $557 million.

I also urge you to consider a $30 million expansion of funds for community health centers which provide services to women and children in high risk areas. In the City of Boston we currently have 26 neighborhood health centers providing health care to poor and vulnerable populations many of which rely upon funding from the the Urban Health Initiatives program as well as the Maternal and Child Health Block Grant.

The second area of concern I would like to address today is improving educational performance and opportunities for children. Once again the poor are often the most vulnerable. Each year in this country approximately 700,000 students at the ninth grade level and above are dropping out of school. Children from poor families are many times more likely to drop out than children from more affluent households. This is certainly true in the City of Boston where 30% of our children live below the poverty line, and 42% of our city's ninth graders drop-out before finshing their high school education. Those who drop out are two and one-half times more likely to be unemployed than high school graduates.

Many children leave school when their performance lags far behind that of their age group. Under Chapter 1 of the Educational Consolidation and Improvement Act of 1981 remedial education programs are funded to give poor children the support they need to keep up with their grade level. The main component of the Chapter 1 funding is based on the number of children living in poor families within a particular school district. Studies conducted on the effectiveness of Chapter 1 funded services indicate that it has helped to raise achievement levels amongst students participating in its programs.

This fiscal year Chapter One is funded at the level of $3.944 billion with the President's budget request for next year seeking a modest increase of $104 million. Today I am joining other child advocates and parents asking you to support a $500 million dollar increase for this program for next year and similar increases in succeeding years.

Another youth investment strategy is increasing their ability to compete in the job market. Summer youth employment programs as well as year round education and training programs for young people have been drastically cut.

I urge you to increase funding for summer youth employment by $200 million dollars as well as funding for WIN, Job Corps and JTPA. In Massachusetts our WIN allocation has acted as a "seed grant" to the successful E.T. Choices program. Children living in households headed by AFDC recipients as well as those who become parents at an early age will benefit from increased federal funding of Job Training Programs.

In making this request, I am aware the state and local governments, particularly those in regions experiencing economic growth need to do their share. I am here to tell you that in Boston, as in many other cities, we have implemented a number of creative strategies to deal with problems such as infant mortality, school drop out rates, and job training programs.

In response to growing infant mortality rates, we in Boston have doubled our committment to programs seeking to reduce infant mortality this year. Unfortunately, in spite of a 32% increase in need we will have no more funds from the federal government to deal with this program next year than we now have if the President's budget recommendation stands.

To deal with high drop-out rates, we have expanded through the Boston Youth Partnership alternative education programs and reentry programs targeted at middle school students. We need the federal government to do its part through expanded funding for Chapter One as well as provide funding to develop programs that prevent drop-out.

Recently, the National Alliance for Business received a grant from the Department of Health and Human Services to replicate Boston's drop out prevention program in seven other American cities. I urge the continuation and expansion of the "Youth 2000" partnership by DHHS.

Through Boston's linkage program we have received committments from developers for jobs and training funds. To make sure these programs and opportunities will reach those who need it most we are creating neighborhood "JobStops" to provide information and access to these opportunities. In spite of this we have experienced a sharp decline in funding available to the City from the Job Training Partnership Act from $7.5 million at its outset to $4.4 million. This is due to both declining appropriations as well as formula changes which do not weight poverty as heavily as before in determining JTPA allocations to communities.

The investment strategy I am seeking your support for like all good investments is cost beneficial and yields dividends. Every dollar spent for pre-natal care can save over $3 in the first year of life by reducing the need for hospital stays among infants. Over a lifetime, that same dollar saves up to $11 in total medical expenses because fewer children are born with permanent health problems.

In 1985, Assistant Professor James Catterall of U.C.L.A. did a projection of "earnings losses" based on the number of students who had dropped out from the Class of 1981. That study projected that these students would suffer a lifetime earnings loss of $228 billion which would translate into a loss of $68.4 billion in taxes.

I welcome the leadership that you can provide in Congress to begin reversing the disinvestment that has occured on the federal level in the lives and futures of our nation's young people.

STATEMENT OF THOMAS M. DOWNS, CITY ADMINISTRATOR/DEPUTY MAYOR FOR OPERATIONS FOR THE DISTRICT OF COLUMBIA

ACCOMPANIED BY DR. ROBERT WASHINGTON, COMMISSIONER OF MENTAL HEALTH FOR WASHINGTON, DC

Senator INOUYE. Our next witness is the City Administrator of the city of Washington, District of Columbia, the Honorable Tom Downs.

Welcome, Mr. Downs.

Mr. DOWNS. Mr. Chairman, thank you for the opportunity to appear before you this morning. I also have with me Dr. Robert Washington, the Commissioner of Mental Health for Washington, DC.

Senator INOUYE. Welcome, sir.

Mr. DOWNS. I have some prepared testimony, but I want to get to the heart of the matter.

The Congress just authorized the transfer of St. Elizabeths Hospital to the District of Columbia, a long-standing Federal operation that had a number of problems, but the decision was made that that was more a local function than a national function.

We have accepted that. We are on time with the comprehensive mental health transfer. We have worked out a tremendous outreach program with both the advocacy community patients and the neighborhood and with the council. We are in agreement on our plan. We have funded that plan. There is $159 million budgeted by the city for fiscal year 1988 and approved by the council that meets this commitment.

I am sorry to say that the Federal commitments in this area about transition are not being kept. There was a commitment to the intent of the law that the current $4.4 million training program that is currently run by NIMH be continued through transition.

Public Law 98–621 indicates the intent of the Congress that the Federal Government continue this training program. It is essential for the retention of specialized nursing and health care and mental health at St. Elizabeths. The National Government has requested no funds for that program for the coming year, crippling us in our training and retention of specialized staff at a critical juncture.

Second, the proposed capital renovation project authorization is $26.7 million. We are getting a campus that has a number of buildings on it that do not meet Medicare/Medicaid standards for eligibility. It was the agreement when we were given this institution by the Congress and the National Government that we would be given a whole institution, not one crippled by a plan that was severely underfunded and in many cases is 50 or 60 years out of date.

Independent experts recognized by the National Government indicate that the cost of the renovation to have at least standardized facilities is $84.3 million to meet licensure standards. Without these licensure standards, we will be losing millions of dollars in patient care reimbursement on Medicare and Medicaid.

To compound all of this and in a sense to rub salt in the wound, the budget contains the language that:

> The District Government agrees that the amount granted under this heading satisfies fully the Secretary of Health and Human Services' responsibilities under section 4 and 9(F)(2) of the act.

In other words, they are asking that the Congress ratify that their dereliction of duty meets fully the intent of the Congress.

We are not reluctant to meet our obligations in this area. We think, though, that the Federal Government ought to honor its commitment. The executive branch apparently does not feel that way, and we are hoping and depending on the Congress to fulfill these commitments about this critical piece of our national capital mental health care system. Without these funds, we are going to be unduly crippled in providing these services.

PREPARED STATEMENT

That concludes my statement, Mr. Chairman. I would be glad to answer any questions you may have.

[The statement follows:]

STATEMENT OF THOMAS M. DOWNS

Mr. Chairman, I am Thomas M. Downs, City Administrator/ Deputy Mayor for Operations for the District of Columbia. I appreciate this opportunity to discuss the District's new comprehensive Mental Health System and its implementation. I am pleased to report that our progress in implementing the final plan is proceeding on schedule (Progress Report attached). Unfortunately, the Federal Government through its proposed appropriation for Fiscal Year 1988 has put that implementation in serious jeopardy.

I want to assure you that the District government is fully committed to the successful and on-schedule implementation of the final plan with special concern for the clients, the employees, and the land and buildings occupied by St. Elizabeths Hospital. Each of these special concerns, along with the other aspects of the final plan, are being addressed effectively.

The $159 million budgeted by the Mayor for Fiscal Year 1988 and approved by the City Council fully meets the District's commitment for implementation of the final plan in the coming year. The Federal administration's proposed appropriation for Fiscal Year 1988 does not meet the spirit of P.L. 98-621, the "Saint Elizabeths and District of Columbia Mental Health Services Act" in two vital regards. The first is that there is no appropriation request at all for continuing any part of the current $4.4 million training program, although P.L. 98-621 states the intent of Congress that the Federal Government continue training programs at Saint Elizabeths. These professional training programs have been an important resource for recruiting badly needed Psychiatrists and Nurses and other professionals for Saint Elizabeths. The loss of these programs will have a substantial negative effect on Public Mental Health Services with an accompanying decrease in quality care for clients for many years to come. In addition, the training necessary to enable the employees of Saint Elizabeths Hospital become fully functional in the new integrated mental health system for the District as intended by P.L. 98-621 will be impossible without continuation of the funding (Training Obligations Report Attached.)

The second is the proposed capital renovation allocation of $26.7 million which clearly does not meet the intent of Congress. The independent experts, HIFAB International, which the District has engaged have estimated cost to be $84.3 million (Cost Summary Attached.) The Congress intended the Federal Government to complete the renovation of the buildings to meet licensure and accreditation standards, $26.7 million will not permit this. As a result, at a minimum, several million dollars in medicaid and medicare revenue will be lost and, at the maximum the buildings will become unusable, patient care will become impossible, and patients will have to be released to the streets, many of them to become numbered among the homeless. It is critical that the appropriations be corrected at this time. Furthermore, because the budget contains the language that "The District Government agrees that the amount granted under this heading satifies fully the Secretary of Health and Human Services responsibilities under Section 4 and 9(f)(2) of the Act," the language should be altered to allow for further review of the need in the future.

With these two corrections, the addition of $4.4 million for the training program and the addition of $57.6 million for capital renovation, the administration's budget will meet both the letter and spirit of P.L. 98-621 and allow us to proceed to successfully implement the final plan in a timely fashion.

Attachment

D.C. COMMISSION ON MENTAL HEALTH SERVICES

PROGRESS IN IMPLEMENTING THE FINAL PLAN

As of March 1987

Efforts to implement the Final Plan began in the Spring of 1986 immediately after Council and Congressional review of the Preliminary Plan. Highlights of our achievements to date are:

PATIENT SUPPORT SERVICES

- Realignment of Inpatient Hospital Programs — Hospital Divisions were organized previously by geographic location of patient referrals; during the summer of 1986 all programs were realigned along functional program lines, consistent with the Plan. Over 1,000 patients were moved, resulting in creation of all functional inpatient programs anticipated by the Plan.

- Realignment of Outpatient Adult Programs — consistent with the Plan, the Area D CMHC has already been reorganized to reflect the structure and programs required for adult regional centers, particularly the creation of a new Community Support Program for elderly clients. Realignment of both North and South CMHCs operated by MHSA will be completed by the end of March.

- Creation of the Emergency Psychiatric Response Divisior — the Plan calls for a single EPR capability to be located centrally rather than at SEH. This has been accomplished with the opening of the EPRD on January 28h, at the South Center. This program now offers comprehensive crisis services, including screening of all potential Hospital admissions for alternative disposition.

- Expansion of Crisis Outreach Services — a principle goal of the Plan has already begun. Outreach visits by the MHSA CRB have increased from approximately 30 per month in April 1986 to over 130 in January 1987. Short-term crisis residential capacity has increased from 7 beds in 1985 to 24 beds in January 1987.

- Expansion of Case Management Services — MHSA contracts for case management services have increased from 85 slots in FY 1985 to 434 in FY 1987, including 300 for persons who are homeless or at risk of becoming homeless. In addition, direct publically delivered case management services in the Community Outreach Branches will increase from 150 to 200 in FY 1987.

- Expansion of Child and Youth Services — Child and youth programs sponsored by MHSA have been strengthened, consistent with the Final Plan. A second Therapeutic Nursery Program has been opened at Garrison Elementary School In-home crisis services began a year ago, with services currently provided to 40 families per year. Treatment, counselling and screening units at the Receiving Home and Oak Hill are staffed and in operation and initiatives to provide services to Hispanic children and youth have begun, including hiring a Hispanic clinician and supporting a core treatment component at Andromeda for children.

- Decline in Resident Census at SEH — the resident census at SEH has declined from an average of 1,661 in the Spring of FY 1986 to 1,514 in December 1986, as a result of improved community programs and fewer admissions.

o **Placement of Nursing Home Patients at D.C. Village** — In December, 40 SEH patients in need of 24-hour nursing care were placed at D.C. Village

pursuant to a cooperative agreement between the facilities which provides that SEH staff the unit while D.C. Village provides all necessary patient care support and facilities services.

o **Consolidation of Inpatient Forensic Services** — The current inpatient program for forensic patients operated at the Ugast Center is now being consolidated with the inpatient programs operated at the John Howard Pavilion of SEH.

o **Training Activities have Started** — A plan to provide necessary training to staff who will require licensure to perform clinical and facilities support duties in the District system has been completed and is now being implemented. Approximately 70 individuals are participating now in these programs. In addition, specialized training for nursing home operators receiving patients from the Hospital was completed in the Fall. Case management training has been provided to an initial group of 30 staff and the second group begain training in February. Clinical and organizational development training is being provided now to prospective managers of the Child and Youth Services Administration.

PATIENT SUPPORT SERVICES

o **Transition Workplans are Completed** — Each area of responsibility within the Commission on Mental Health Services has a transition plan. These plans are being implemented now by responsible personnel from MHSRO, MHSA, and SEH.

o **Appointments of Key Staff are Being Completed** — Candidates for key positions have been identified and the selection process is proceeding very rapidly. We hope to have identified most senior management staff for the Commission [illegible] areas.

o **Personnel Actions are Being Prepared** — Position descriptions for each position within the Commission are now being written and reviewed. A personnel implementation team has been established, staff from the D.C. Office of Personnel have been assigned to work on classifying positions full-time, and the classification process began in February. Capabilities to support and monitor personnel actions using automated data processing technology have been developed and are now being refined and integrated. Actual job offers should be extended to SEH staff begining in July.

o **Automated Data Processing Services for SEH and MHSA have been Integrated** — Beginning in April 1986, all ADP services for both MHSA and SEH will have been converted to the same hardware and software configuration. Planning for ADP services to the Commission during the first three years of operation has been completed and necessary procurement documents have been prepared for processing.

o **Training of Personnel, Financial Management, and Procurement Staff has Begun** — SEH staff are being trained on District policy and procedure in these areas — training on general practices has been ongoing since last summer and intensified training on specific functions will be implemented over the next several months. DHS managers have been meeting with these staff on a regular basis to identify and solve transition problems in administrative areas.

o **Laboratory Services have been Consolidated Throughout the System** — Beginning February 9th, the SEH laboratory began providing laboratory testing and result reporting services to both SEH and MHSA facilities in the same manner as envisioned in the Final Plan.

TRAINING OBLIGATIONS OF THE FEDERAL GOVERNMENT TO THE EMPLOYEES OF SAINT ELIZABETHS HOSPITAL

I. Background

Public Law 98-621 Section 2B, Item 5 states "It is the intent of Congress that the Federal government have the responsibility for the retraining of Hospital employees to prepare such employees for the requirements of employement in a comprehensive District mental health system;" and Item 6 states "It is the intent of Congress that the Federal government continue high quality mental health research, training and demonstration programs at Saint Elizabeths Hospital."

In its testimony to Congress last Spring the American Psychiatric Association stated "There is a need for full Congressional support of training. In P.L. 198-621 Congress wisely called for continued Federal support of traininng. Traininng at Saint Elizabeths has been a Federal magnet that has attracted minority trainees in unusually large numbers, and has attracted future Hospital, local and national mental health leaders. Federal supported training has been a conduit and catalysis of current and innovative treatment for the mentally ill. Saint Elizabeths training programs have enhanced the knowledge and skill of every clinician who serves any of the Hospital's patients. Relative to innovative approaches, training assisted Saint Elizabeths in establishing new psychotherapeutic treatments in the 1940s, in understanding new psychopharmacological therapies in the 1950s, in developing community psychiatric programs in the 1960s, in comprehending new diagnostic entities in the 1970s, and in exploring outreach psychiatric services to the homeless in the 1980s. This Federal legacy has been a key element in Saint Elizabeths' sense of pride and worth over the decades. At a cost of only five million annually, this Federal legacy can continue as an expression of Congress' wish that the Nation Capital's most dangerous, most disturbed and most disabled mentally ill receive quality services."

The Federal Response

The President's FY '88 budget does not include the $4.4. million it costs to run the training program at Saint Elizabeths. In its comments on the District's Final Implementation Plan the Department of Health and Human Services stated that "since the transfer statue does not obligate the Federal government to fund any training programs at the hospital after the transfer on October 1, 1987, the Department would not be bound to anything in the Plan to the contrary."

This indicates a major difference between Congressional intent for the Federal government's responsibility for training after October 1, 1987 and the Federal government's interpretation of its responsiblity for training at that time. If the Congressionally mandated training programs are to be maintained, specific appropriations must be made by Congress.

FEDERAL FY 1988 APPROPRIATION REQUEST
RENOVATION COSTS ANALYSIS
SAINT ELIZABETHS HOSPITAL

The District and federal governments disagree regarding the extent of federal liability for renovations to the Saint Elizabeths under the provisions of the Saint Elizabeths Hospital and District of Columbia

Mental Health Services Act, P.L. 98-621. An analysis of the disagreement is presented below.

I. Summary

The following chart summarizes the differences between the federal proposal and the District's proposed revised federal capital allocation, in each of the following categories:

Summary Budget Chart
(in millions)

	Federal	District	Difference
A. Renovation: Permanent Buildings			
1. 11 buildings: major renovations	$ 8.4	$ 31.5	$ (23.1)
2. 20 buildings: minor renovations	4.8	5.2	(0.4)
3. 14 buildings: already renovated	2.3	3.0	(0.7)
B. Transition buildings	0.6	13.5	(12.9)
Subtotal	16.1	53.2	(37.1)
C. Lead paint and asbestos removal*	1.3**	4.9	(3.6)
D. Site and utilities	6.8	18.7	(11.9)
Subtotal	24.3	76.8	(52.5)
E. Escalate (10% to 10/87)**	2.5	7.5	(5.0)
TOTAL	$ 26.8	$ 84.3	$ (57.5)

* Ten percent of A(1) and (2) plus B.

** Does not include lead paint and asbestos removal in Steam Plant.

II. Background

Under P.L. 98-621, the federal government will transfer to the District of Columbia government on October 1, 1987, those buildings on the grounds of SEH identified as necessary to the operation of the new D.C. comprehensive mental health system. To meet the needs of the new system, the District requires all the buildings and grounds east of Martin Luther King Jr. Avenue: approximately 150 acres, 20 major buildings and 30 minor buildings. In addition, important buildings on the West side of the campus will also be required, at least temporarily.

In recognition of the inflation shortfall in the 1976 renovation funding, the general deterioration of the Hospital, and the fact that Hospital facilities would in 1987 for the first time be required to meet D.C. codes, the Congress, through P.L. 98-621, required the federal government to:

1. Determine, through a physical plant audit, repairs and renovations necessary to bring Hospital buildings up to all applicable code requirements and standards; and

2. Complete such repairs and renovations to those buildings, sites and utilities identified for use in the D.C. comprehensive mental health system.

The federal government, with the cooperation of District officials, engaged an independent contractor in 1985 to conduct a physical plant audit. Completed in January 1986, it included a cost estimate for renovations to all buildings and infrastructure of $68.8 million; the cost estimate for just those buildings and systems required by the mental health system is $55.0 million.

The District government independently engaged an engineering firm affiliated with a nationally recognized group of psychiatric consultants, which conducted a review of the plant from the point of view of an acceptable modern therapeutic environment, and determined that the cost of renovating buildings and systems for the mental health system would be at least $76.8 million without inflationary costs.

The President's FY 1988 budget now proposes to meet all its outstanding obligations with regard to capital repairs by an appropriation of only $26.8 million.

III. Calculation of Renovation Costs

The federal government estimate of the cost of meeting its obligations is disputed by the District government in four main respects: (1) the renovations required for major patient care buildings not yet renovated are significantly underestimated; (2) the cost of correction of code deficiencies in buildings recently renovated is significantly underestimated; (3) the extent of repairs required for infrastructure and utility systems is significantly underestimated; and (4) the need to meet code compliance standards in buildings which will be used for 2-5 years during the transition period, but not necessarily permanently, is not adequately recognized.

A. Renovation Costs for Permenent Buildings

A total of 46 patient care and program support buildings are to be permanently transferred to the District in 1987.

They include buildings scheduled for major renovations, facilities scheduled for minor renovations, and buildings recently renovated which need code deficiency corrections.

The District government estimates a need for $31.5 million to bring 11 major buildings into compliance with building code, health care licensure and accreditation standards. The federal government has allocated $8.4 million for this cost, based on a narrow definition of building code corrections. No funds are allocated for restoring the buildings to usable condition following the code compliance corrections, nor are funds included to meet the licensure and accreditation standard for a proper therapeutic environment.

The District government estimates a total cost of about $5 million to carry out less substantial renovations of 20 additional permanent buildings. The federal estimate of $4.8 million does not substantially differ with respect to these buildings.

The physical plant audit divided Hospital buildings into two categories: unrenovated and previously renovated buildings. The second group of buildings (Short Form buildings) received only a cursory abbreviated audit limited to architechtural character, gross square feet, population and current use, because they were assumed to be in good condition and to meet all applicable codes and requirements. The audit did not include fire prevention and protection evaluation nor structural, plumbing, mechanical and electrical evaluation.

However, when a recently renovated building was inspected for compliance by D.C. regulatory officials, several severe deficiencies were identified (e.g. failure to meet fire safety standards for doors, windows, stairs, etc.). The cost of code compliance work in the Short Form buildings is estimated by engineering consultants at about $3.0 million.

The federal government did eventually recognize the validity of this problem, and included $2.3 million for this purpose in its proposal. The allocation was included, in part, by reducing amounts previously allocated to other recognized renovation needs. A full contingency fund of $3.0 million should be allocated in addition to all other costs.

B. Transition Buildings

With the exception of the power plant, the federal proposal does not include any funds for repair or code compliance of buildings on the West side of the campus which will be used during the five year transition period pending the renovation of East side buildings and implementation of the Mental Health System plan targets for community facilities. The federal government argues that it is only obliged to fund renovation of those buildings which will become permanently part of the mental health system.

However, the audit established significant code compliance deficiencies in these transition buildings. The District government will be responsible for patient care and safety, and will be required to meet code and licensure standards for buildings which are used for a significant period of time under the Plan. It was clearly the intent of Congress that the federal government not turn over for District use buildings which would not meet the applicable standards. The District has identified a cost requirement for minimum code compliance repairs, in large part fire safety repairs, of $13.5 million.

C. Lead and Asbestos Removal

The federal government proposes a contingency fund to cover the cost of removing lead based paint and asbestos from SEH buildings, at 10 percent of the cost of all building renovation. The District government concurs with this methodology.

D. Site and Utilities

The District government estimates $18.7 million to repair infrastructure systems, based entirely on the federal audit findings. The federal government proposal of $6.8 million for this purpose is inexplicably limited to a small portion of interconnected infrastructure systems.

E. Inflation Adjustments

The federal proposal includes an initial year inflation cost of 10 percent, but no further inflation allowance because the proposal is to pay the entire capital allocation to the District at the beginning of the transition period, so that the investment of funds will provide a means of balancing inflationary increases. The District government concurs with this proposal.

Senator INOUYE. Mr. Downs, is the $57.6 million for capital renovation urgent at this moment? Is it urgent?

Mr. DOWNS. In order to meet the care standards that Medicare and Medicaid impose for the reimbursement of funds—in other words, we would not be eligible to be certified, Medicare/Medicaid eligible, in those facilities that are not renovated. If that takes place, our operating costs begin to skyrocket because we cannot participate in those national health care programs because of the status of our physical plant.

We do not meet code. We do not meet a number of treatment of care national standards in those buildings. Our expectation was that, at minimum, we would meet national code for the buildings we were given to provide care in.

Senator INOUYE. It is your understanding that this was the intent of your agreement with the executive office?

Mr. DOWNS. It was the agreement that we would not be given a 100-year old outdated facility. If we had to absorb this $160 million a year worth of operating costs for St. Elizabeths, at least we were going to be given a plant and a group of employees that were trained and motivated to operate the system and not again be programmed for failure by being given incomplete resources to carry out a complex mission.

Our understanding was that there were commitments made at the executive level that we would be given an operable system, not one that had operated in the past because the National Government simply exempted itself from national standards in these areas and when it became ours we had to live in compliance with those standards.

Senator INOUYE. The $4.4 million, is that an annual allotment?

Mr. DOWNS. It has been a part of the annual budget NIMH for St. Elizabeths for a number of years. It is part of the commitment to training and development of staff, and right now it is particularly critical as we talk to those individuals about retention within the St. Elizabeths mental health care system about their career opportunities within the system.

If they transfer from the National Government to the local government, they have concerns about the commitment to professional development training, standards of care, et cetera. Right now in 1988, those authorities are in the NIMH NIH budget. Without them, they cannot train to adequate standards. The staff, I think, would be more than willing to testify to the adverse impact of the deletion of the training funds out of NIMH's budget this year.

Senator INOUYE. What is your patient load now?

Mr. DOWNS. Dr. Washington?

Dr. WASHINGTON. There are currently 1,500 people in St. Elizabeths Hospital, and the intent is that over the next 4 or 5 years some 750 people will be released into the community. The dollars that now go into the care in the hospital will be used to build the community facilities. We are in the process of doing that.

Senator INOUYE. Has the patient load increased or decreased since the takeover?

Dr. Washington. The inpatient load has been deceasing for the last 2 or 3 years and continues to decrease. As a result, the outpatient load increases. The takeover has not taken place yet. It will be effective October 1.

Senator Inouye. Of the 1,500 patients, how many would you consider as patients from the District of Columbia?

Dr. Washington. I can get the exact figure for you. I do not have the exact figure, but the overwhelming majority, I would guess about 80, 85, to 90 percent are from the District of Columbia.

Senator Inouye. I thank you very much. Mr. Downs.

STATEMENT OF HON. RON DE LUGO, DELEGATE, THE VIRGIN ISLANDS

Senator Inouye. Our next witness is a distinguished citizen of the Virgin Islands. He is the delegate from that territory, the Honorable Ron de Lugo.

Congressman, welcome, sir.

Mr. de Lugo. Good morning, Mr. Chairman. It is a pleasure to appear before you on behalf of the people of the Virgin Islands whom I have the pleasure of representing over there in the House. I am appearing before you again to seek appropriations for fiscal year 1988 for general assistance to education in the Virgin Islands.

As you know, Congress reauthorized the general assistance and territorial teacher training programs in 1984 as part of Public Law 98–511. The appropriations that I seek for fiscal year 1988 are for the full amounts authorized, $5 million for general assistance to the Virgin Islands and $2 million for all the territories, Guam, American Samoa, the Northern Marianas, and the Virgin Islands, for teacher training assistance.

For the last 2 years, Congress has expressed its strong support for these programs in appropriating the full amounts for the first time since the programs were authorized. These appropriations suggest the subcommittee's familiarity with the success and the importance of these programs.

General assistance funds supplement local education expenditures. Education is the single largest budget allocation in the territory, accounting for one-quarter of our budget. That is the operating budget.

As recognized in the authorizing legislation, the education demands made by the resident community and in the large number of alien youngsters are considerable. They leave little flexibility to respond to the laudable but costly Federal requirement under Public Law 91–225 and the court ruling in *Hosier* v. *Evans* that noncitizens be educated.

We have undertaken this, and very briefly, Mr. Chairman, our school population has grown since we undertook this task from some 15,000 students to 25,000 students. In other words, 25 percent of our entire population are students in public schools versus 15 percent on the mainland. Noncitizen students comprise 13.1 percent of the total student enrollment.

Public education commands, as I said, a substantial sum of our total budget, some $65 million, and funds for the general assistance program will be used this year to help finance construction of elementary schools, a senior high school, the renovation and repairs of 20 existing schools at a total cost of some $38 million.

Of course, the general assistance education money will only contribute a small part of carrying that load. Moneys will also be used for curriculum development, textbooks, library books, remedial programs and instrumental supplies. That program is specifically for the U.S. Virgin Islands.

If I could turn to the teacher training program, this is designed to build the pool of local teachers in all the insular areas with the exception of Puerto Rico. The program has enabled some 66 teachers to earn their baccalaureate degrees in teacher education. Of teachers who participate in the program, 92 percent are still teaching in our schools in the territorial school systems of the Northern Marianas and Guam, the Virgin Islands and American Samoa. Some 496 teachers have been identified as not having baccalaureate degrees or are not able to meet certification requirements. These are the teachers that this funding would target.

PREPARED STATEMENT

The Department of Education can train 93 individuals per year. While major steps and improvements have been made, much remains to be done. With the support and the commitment of this committee, we will get the job done for the youngsters in the U.S. territories so that they can receive a better education and they can contribute to the territories' growth and share in the American dream.

Thank you very much, Mr. Chairman.

[The statement follows:]

STATEMENT OF RON DE LUGO

I COME BEFORE THIS SUBCOMMITTEE TO REQUEST FUNDING FOR TWO PROGRAMS, GENERAL ASSISTANCE TO THE VIRGIN ISLANDS AND TEACHER TRAINING FOR EACH OF THE U.S INSULAR AREAS. EACH YEAR, CONGRESS HAS APPROPRIATED FUNDING FOR THESE PROGRAMS AND MAINTAINED THAT FUNDING, DESPITE CONSISTENT ELIMINATION OF BOTH PROGRAMS IN THE PRESIDENT'S BUDGET REQUESTS AND RECISSION PROPOSALS. I WANT TO THANK YOU IN PARTICULAR, MR. CHAIRMAN, FOR YOUR COMMITMENT TO EDUCATION IN THE VIRGIN ISLANDS AND YOUR CONTINUED SUPPORT FOR THESE PROGRAMS.

CONGRESS REAUTHORIZED THE GENERAL ASSISTANCE AND TERRITORIAL TEACHER TRAINING PROGRAMS IN 1984, AS PART OF PUBLIC LAW 98-511. THE APPROPRIATIONS I SEEK FOR FY 1988 ARE FOR THE FULL AMOUNTS AUTHORIZED: FIVE MILLION DOLLARS FOR GENERAL ASSISTANCE TO THE VIRGIN ISLANDS AND TWO MILLION DOLLARS FOR ALL OF THE TERRITORIES IN TEACHER TRAINING ASSISTANCE. FOR THE LAST TWO YEARS CONGRESS HAS EXPRESSED ITS STRONG SUPPORT FOR THESE PROGRAMS BY APPROPRIATING THE FULL AMOUNTS FOR THE FIRST TIME SINCE THE PROGRAMS WERE AUTHORIZED.

THESE APPROPRIATIONS SUGGEST THE SUBCOMMITTEE'S FAMILIARITY WITH THE SUCCESS AND IMPORTANCE OF THESE PROGRAMS. GENERAL ASSISTANCE FUNDS WOULD SUPPLEMENT LOCAL EDUCATION EXPENDITURES. EDUCATION IS THE LARGEST SINGLE BUDGET ALLOCATION IN THE TERRITORY, ACCOUNTING FOR A QUARTER OF THE BUDGET. AS RECOGNIZED IN THE AUTHORIZING LEGISLATION, THE EDUCATION DEMANDS MADE BY THE RESIDENT COMMUNITY AND THE LARGE NUMBER OF ALIEN YOUNGSTERS ARE CONSIDERABLE, AND LEAVE LITTLE FLEXIBILIY TO RESPOND TO THE LAUDIBLE, BUT COSTLY FEDERAL REQUIREMENT UNDER PUBLIC LAW 91-225 AND HOSIER v. EVANS, THAT NON-CITIZENS BE EDUCATED.

FEDERAL IMMIGRATION POLICY REQUIRED THE VIRGIN ISLANDS TO ACCOMMODATE FAR MORE NON-CITIZENS THAN IS REASONABLE GIVEN THE

TERRITORY'S SIZE AND ECONOMY. BECAUSE WE ARE PART OF THE UNITED STATES, THE VIRGIN ISLANDS IS A MAGNET FOR THOSE IN THE EASTERN CARIBBEAN CHAIN OF ISLANDS WHO COME IN SEARCH OF OPPORTUNITY WHICH IS MORE ELUSIVE IN THEIR NATIVE ISLANDS. OVER THE YEARS, THE VIRGIN ISLANDS HAS EDUCATED 30,000 OF THESE STUDENTS IN ITS ELEMENTARY AND SECONDARY SCHOOLS. CURRENTLY NON-CITIZEN STUDENTS ENROLLMENT COMPRISE 13.1 % OF THE TOTAL STUDENT ENROLLMENT IN THE VIRGIN ISLANDS COMPARED TO 3.2% AND 3.5% IN CALIFORNIA AND TEXAS, RESPECTIVELY.

IN SPITE OF FINANCIAL CONSTRAINTS, THE GOVERNMENT OF THE VIRGIN ISLANDS HAS SPENT OVER 131 MILLION DOLLARS TO DEAL WITH THE PHYSICAL PLANT NEEDS CAUSED BY THE INCREASED ENROLLMENT. PREVIOUS CAPITAL IMPROVEMENT PROJECTS HAVE ADDED A TOTAL OF THIRTEEN SCHOOLS SINCE 1970 THAT ARE SERVING 10,808 CHILDREN. THE 19.9 MILLION DOLLARS FROM GENERAL ASSISTANCE HAVE BEEN USED FOR THE CONSTRUCTION, RENOVATION AND REPAIR OF 220 CLASSROOMS, MAINTENANCE OF EDUCATIONAL FACILITIES, ASBESTOS REMOVAL PROJECTS, SPECIAL EDUCATION AND THE PURCHASE OF EQUIPMENT, MATERIALS AND SUPPLIES.

HOWEVER, THESE EXPENDITURES HAVE NOT BEEN SUFFICIENT TO MEET THE PHYSICAL DEMAND AND, AT THE PRESENT TIME, OVERCROWDED CONDITIONS STILL EXIST.

I TOLD THE AUTHORIZING COMMITTEE THAT THE FUNDS FOR GENERAL ASSISTANCE TO THE VIRGIN ISLANDS WOULD BE USED TO HELP FINANCE CONSTRUCTION OF ELEMENTARY SCHOOLS ON ST. THOMAS TO ACCOMMODATE 800 STUDENTS, AT A COST OF 21 MILLION DOLLARS; SENIOR HIGH SCHOOL CLASSROOM ON ST. CROIX TO ACCOMMODATE 1,200 STUDENTS, AT A COST OF 10.7 MILLION, AND RENOVATIONS AND REPAIRS AT 20 EXISTING SCHOOLS AT A COST OF 6.7 MILLION DOLLARS. THUS IN MAJOR CONSTRUCTIONS, RENOVATIONS, AND REPAIRS ALONE, THE DEPARTMENT MUST SPEND IN EXCESS OF 38 MILLION DOLLARS. IN ADDITION, MONIES WILL BE UTILIZED FOR CURRICULUM DEVELOPMENT, TEXTBOOKS, LIBRARY

BOOKS, REMEDIAL PROGRAMS AND INSTRUCTIONAL SUPPLIES.

THE TERRITORIAL TEACHER TRAINING PROGRAM IS A MEANS OF ADDRESSING ANOTHER FACET OF THE EDUCATION PROBLEM FACING THE VIRGIN ISLANDS, AND THE OTHER U.S TERRITORIES.

THE PROGRAM IS DESIGNED TO BUILD THE POOL OF LOCAL TEACHERS WITH A VIEW TOWARDS REDUCING THE HAZARDOUS RELIANCE ON TEACHERS FROM THE MAINLAND. SEVERE PROBLEMS HAVE RESULTED FROM SUCH RELIANCE. MAINLAND TEACHERS ARE OFTEN NOT PREPARED TO COPE WITH THE CULTURAL DIFFERENCES BOTH IN THE ISLAND COMMUNITIES AND IN THEIR STUDENTS. THE RESULT IS A PROBLEM BOTH IN QUALIFICATION AND CONTINUITY.

SINCE THE PROGRAM'S INCEPTION, IN THE VIRGIN ISLANDS ALONE, SIXTY-SIX (66) TEACHERS HAVE EARNED THEIR BACCALAUREATE DEGREES IN TEACHER EDUCATION. OVER THE PAST TWO SCHOOL YEARS, ELEVEN (11) TEACHERS HAVE BEEN CERTIFIED BY THE VIRGIN ISLANDS BOARD OF EDUCATION AS CERTIFIED PROFESSIONALS IN THEIR RESPECTIVE DISCIPLINES. OF THE SEVENTY-SEVEN (77) TEACHERS TRAINED AND CERTIFIED OVER THE PAST SIX YEARS, SEVENTY-ONE (71) ARE STILL TEACHING IN THE TERRITORY'S SCHOOLS. THIS RETENTION RATE OF 92 PERCENT IS INDICATIVE OF THE PROGRAM'S SUCCESS INSPITE OF THE LOW LEVEL OF FUNDING.

HOWEVER, THE NEED TO CONTINUE THE TERRITORIAL TEACHER TRAINING PROGRAM IS VITAL IN ORDER TO UPGRADE THE SKILLS OF TEACHERS IN THE TERRITORIES. IN THE VIRGIN ISLANDS, FOUR HUNDRED AND NINETY-SIX (496) TEACHERS HAVE BEEN IDENTIFIED AS NOT HAVING BACCALAUREATE DEGREES OR ARE DEGREED BUT DO NOT MEET THE MINIMUM CERTIFICATION STANDARDS. THE DEPARTMENT OF EDUCATION/UNIVERSITY OF THE VIRGIN ISLANDS COOPERATION AGREEMENT, CAN, ON AVERAGE, TRAIN NINETY-THREE (93) INDIVIDUALS PER YEAR FROM 1988 THROUGH 1993; A RATE ESTIMATED TO MEET THE CURRENT SHORTFALL IN PROFESSIONALLY PREPARED TEACHERS IN THE SYSTEM.

WHILE EACH TERRITORY HAS DEVISED VARYING PROGRAMS TO MEET ITS INDIVIDUAL SITUATION, THESE PLANS HAVE THE COMMON GOALS OF TRAINING RECRUITED TEACHERS, SPECIALISTS AND ADMINISTATORS TO UNDERSTAND AND COPE WITH THE UNIQUE CULTURAL AND SOCIAL ASPECTS OF THE COMMUNITY, AND TO IMPROVE THE TEACHING METHODOLOGY. THIS HAS RESULTED IN AN INCREASE IN TEACHER EFFECTIVENESS AND A DECREASE IN THE HIGH TEACHER TURN-OVER RATES. IN ADDITION, THE DEPARTMENT OF EDUCATION IN THE RESPECTIVE TERRITORIES HAVE IDENTIFIED HIGHLY QUALIFIED TEACHER AIDES, PARAPROFESSIONALS, AND GIFTED SECONDARY STUDENTS AND ENCOURAGED THEM TO PURSUE CAREERS IN THE TEACHING FIELD.

THE PROGRAM HAS EXTENDED EDUCATIONAL OPPORTUNITIES FOR LOCAL RESIDENTS WHO HAVE PREVIOUSLY WORKED IN THE SCHOOLS, GENERALLY AS NON-DEGREED TEACHERS AND PARAPROFESSIONALS, AND HAS RESULTED IN AN INCREASE IN QUANTITY AND QUALITY OF LOCAL RESIDENTS WHO HOLD TEACHING POSITION, PROVIDING FOR GREATER CONTINUITY OF INSTRUCTION.

THUS, WHILE MAJOR STEPS HAVE BEEN TAKEN, THERE IS STILL A NEED FOR ADDITIONAL FUNDING TO COMPLETE THE JOB IN THE VIRGIN ISLANDS, AND I BELIEVE THIS IS TRUE FOR ALL OF THE TERRITORIES. I URGE THIS SUBCOMMITTEE TO KEEP ITS COMMITMENT TO THESE IMPORTANT PROGRAMS IN THE U.S. TERRITORIES THROUGHOUT THIS APPROPRIATIONS PROCESS. I REALIZE THAT WE HAVE A DEFICIT TO CONTEND WITH, BUT SUBMIT THAT THERE IS A GREATER EXPENSE IN ABANDONING SOLID EDUCATION PROGRAMS SUCH AS I HAVE DISCUSSED TODAY.

Senator INOUYE. Congressman, I thank you very much.

I am certain you are aware that this subcommittee, especially during the chairmanship of Mr. Weicker, has been very supportive of the problems in the Virgin Islands, and I can assure you that this subcommittee will do everything to continue this.

What did you mean by 13 percent of your students are noncitizens?

Mr. DE LUGO. These are students who have come to the territory. Their parents came under H2 and H4 immigration programs to work in the territory. They remained, and these students in many cases are not U.S. citizens at this time. They have been assimilated into our educational system.

Senator INOUYE. You have also indicated that 496 teachers do not meet the minimum certification standards?

Mr. DE LUGO. That is for all of the territories, Mr. Chairman. That is not just the Virgin Islands.

I have to correct the record. That is just the Virgin Islands.

Senator INOUYE. Just the Virgin Islands, and what percentage is this 496 of the total number of teachers?

Mr. DE LUGO. I will have to submit that for the record, Mr. Chairman.

[The information follows:]

LETTER FROM RON DE LUGO

May 7, 1987

Honorable Lawton Chiles
Chairman
Subcommittee on Labor, Health and Human Services,
Education adn Related Agencies
Committee on Appropriations
186 Dirksen Senate Building
Washington, D.C. 20510

Dear Mr. Chairman:

On May 4, 1987 when I testified before your Subcommittee, Senator Inouye raised several questions that I would like to respond to.

In my testimony on the Territorial Teacher Training Program I stated that there are "496 teachers who are not degreed or do not meet the minimum certification requirements." There was some confusion as to whether this number was for all of the territories or only the Virgin Islands. In addition, Senator Inoyue asked how many teachers there are in the Virgin Islands public school system.

During school year 1985-86, there were 1,658 teachers in the Virgin Islands public school system.

The statement that there are 496 teachers who are not degreed or do not meet the minimum certification requirements is applicable only to the Virgin Islands. However, that includes both public and non-public schools. Of the 496, 320 are in the public school system and of that number 210 or 12% of all teachers do not have a baccalaureate degree. The remaining 110 teachers do have baccalaureate degrees, but do not meet the minimum certification requirements for the subject area in which they are teaching.

The Department of Education has informed me that the 320 teachers who fall into this category are required to participate in the Territorial Teacher Training Program in order to correct these deficiencies. Since most teachers are only able to take one or two courses per semester, it usually takes several years to fulfill this requirement.

I have enclosed a copy of the Commissioner of Education's testimony before the House Appropriations Committee as well as a more detailed explanation of the Territorial Teacher Training Program in the Virgin Islands.

I hope that I have been able to answer the questions raised in the hearing. If you need additional information or have other questions, please do not hesitate to contact me.

Once again, thank you, Mr. Chairman for your continued support for education in the U.S. territories.

Sincerely,

Ron de Lugo
Member of Congress

Justification Statement

Re: Section 1525 Funding

The teacher training provision as prescribed in Public Law 95-561 is most beneficial to the teaching profession in the Virgin Islands. The non-degreed as well as degreed individuals who are teachers in the public and non-public schools of the Virgin Islands have benefitted from the assistance provided through the teacher training component. The residual spin-offs from the additonal training available to teachers have resulted in more teachers being certified by the Virgin Islands Board of Education to teach in their respective disciplines, and a better instructed student population.

As outlined in our original application for teacher training funding, the Department of Education and the University of the Virgin Islands would work cooperatively to plan, develop, coordinate and execute a "plan of action". This cooperative venture has worked in the best interest of the teachers, students, and schools because of the professional upgrading taking place.

Since the program's inception sixty-six (66) teachers have earned their baccalaureate degrees in teacher education. Over the past two school years eleven (11) teachers have been certified by the Virgin Islands Board of Education as certified professionals in their respective disciplines. Of the seventy-seven teachers trained and certified over the past six years, seventy-one (71) are still teaching in the territory's schools. This retention rate of 92 percent is indicative of the program's success inspite of the low level of funding.

The need to continue the Territorial Teacher Training program on a long-term basis in the Virgin Islands is most obvious because a sizeable number of teachers needs to upgrade their skills. Education data indicate that approximately four hundred ninety-six (496) teachers have been identified as not having baccalaureate degrees or are degreed but do not meet the minimum certification standards as established by the Virgin Islands Board of Education. For further clarification of the statistics cited you may refer to Tables A and B and Appendix A.

In view of the data presented, the Department of Education/ University of the Virgin Islands cooperative work agreement can, on average, train ninety-three (93) individuals per year from 1988 through 1993. This would meet the current shortfall in professionally prepared teachers in the system.

GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

DEPARTMENT OF EDUCATION
OFFICE OF THE COMMISSIONER
STAFF DEVELOPMENT & TRAINING
TERRITORIAL TEACHER TRAINING ASSISTANCE PROGRAM

1. Number of students enrolled in school in 1985-86. (Source: PRE 3/14/86)

   - Public Schools 25,476
   - Private Schools 6,563

2. For each year since the inception of the TTTAP (1980-1986) the following information is supplied:

		1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
1. Numbers of teachers in Territory	PUBLIC	1570	1567	1575	1647	1683	1665	1658
	PRIVATE	382	391	402	420	434	457	501
2. Numbers of teachers with full credentials	PUBLIC	1359	1371	1336	1418	1476	1351	1338
	PRIVATE	[illegible]	268	269	277	273	288	325
3. Numbers of teachers with less than full credentials	PUBLIC	211	196	239	229	207	314	320
	PRIVATE	111	123	133	143	161	169	176
4. Numbers of teachers with full credentials trained by TTTAP	PUBLIC	0	0	8	7	16	17	14
	PRIVATE	0	0	0	0	1	7	7
5. Numbers of teachers with less than full credentials trained by TTTAP	PUBLIC	0	0	118	156	131	140	136
	PRIVATE	0	0	2	23	48	92	101
6. Numbers of teachers served by T.T.T.A.P.	PUBLIC	0	0	126	163	147	157	150
	PRIVATE	0	0	2	23	49	99	108

TABLE A

NUMBERS OF GRADUATES SERVED BY THE TTTAP IN THE U.S. VIRGIN ISLANDS FOR SCHOOL YEARS 1981-86 FROM PUBLIC AND PRIVATE SCHOOLS BY DISTRICT

SCHOOL YEAR	ST. CROIX DISTRICT		ST. THOMAS/ST. JOHN DISTRICT		VIRGIN ISLANDS TOTALS	
	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE
1981-82	4	0	4	0	8	0
1982-83	5	0	2	0	7	0
1983-84	14	1	2	0	16	1
1984-85	11	6	4	1	15	7
1985-86	3	5	3	1	6	6
TOTALS	37	12	15	2	52	14
TOTALS	49		17		66	

TABLE B

NUMBERS OF DEGREED BUT NON-CERTIFIED TEACHERS SERVED BY THE TERRITORIAL TEACHER TRAINING ASSISTANCE PROGRAM IN THE U.S. VIRGIN ISLANDS WHO MET CERTIFICATION REQUIREMENTS DURING 1984-1986 FROM PUBLIC AND PRIVATE SCHOOLS BY DISTRICT

SCHOOL YEAR	ST. CROIX DISTRICT		ST. THOMAS/ST. JOHN DISTRICT		VIRGIN ISLANDS TOTALS	
	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE
1984-85	1	0	1	0	2	0
1985-86	3	0	5	1	8	1
TOTALS	4	0	6	1	10	1
TOTALS	4		7		11	

Nonetheless, there continues to be a need for this Program to assist the Territory in ensuring that teachers will be provided the opportunity to attain the minimum certification requirements.

Records indicate that there are approximately four hundred and ninety-six (496) teachers who have been identified as either lacking undergraduate degrees, or degreed but do not meet certification requirements. This is amplified in item # 3 of Appendix A which reflects that of the 496, three hundred and twenty (320) are teaching in the public schools and one hundred and seventy-six (176) are teaching in private schools throughout the Territory. Based on the total numbers of teachers in the Territory as shown in item # 1 of Appendix A, this means that 19% of public school teachers and 35% of private school teachers are still lacking certification requirements.

Further, many of the teachers who are enrolled in the Territorial Teacher Training Assistance Program are only able to take one, or possibly two, courses per semester. At this rate, it could take a given teacher several years to accumulate the required number of semester hours in order to meet graduation requirements.

There also exists the need to strengthen the curriculum development efforts of the Department. Presently, the school system is engaged in the writing of curricula in the areas of:

-English/Language Arts for Special Education
-Health Education
-English/Language Arts, K-12
-Science,K-12

and it is involved in the piloting of draft curricula in

-Social Sciences and

-Mathematics for Special Education students.

There is additionally, a wide range of needs in the training of teachers in other areas including:

-Music

-Bilingual Education and

-Computer Education.

There is also a dire need to train teachers of mathematics. Although a Mathematics,K-12 Curriculum was designed, piloted, evaluated and placed in the hands of the teachers, the most important component of that curriculum development process, that of training teachers to use the guide, still needs attention.

It is clear to all involved that without the financial support of the Territorial Teacher Training Assistance Program, the Territory will experience severe hardship.

STATEMENT OF HON. LINDA A. CREQUE, COMMISSIONER OF EDUCATION, U.S. VIRGIN ISLANDS

Mr. Chairman, Members of the Subcommittee, it is a pleasure to be here. It is an honor to have this opportunity to speak with you about education in the Virgin Islands. I am the recently confirmed Commissioner of Education in the Virgin Islands, appointed by our new Governor, Alexander A. Farrelly, after unanimous approval by our Senate.

They say in the Virgin Islands that I have inherited a difficult job. Part of the difficulty stems from events that transpired 17 years ago. In June, 1970, the United States District Court changed the face of education in our Territory. It handed down a decision in Hosier v. Evans, 8 V.I.R. 27, that increased enrollment in V.I. Schools by 6,118 students or 31.5% in one year.

It was a benchmark decision for the Virgin Islands. The court said non-citizen children of school age cannot be denied entry into the public school system even if enrollment would create a burden to the existing classroom space. And that 31.5% increase in enrollment over one year has created a burden from which the Virgin Islands is still struggling to recover.

How large was this burden? In California and Texas, the states having the largest non-citizen school population, non-citizens make up only 3.2% and 3.5% respectively. Our non-citizen enrollment last year was 13.1%.

The decision for the Virgin Islands preceded by a decade the Supreme Court's ruling in Plyler v. Doe, which ordered Texas to admit non-citizen students. I agree with the decision. I agree that non-citizen students should be educated in our schools. The issue in 1972, was not so much whether but how to absorb 6,000 new students into a school system that was only built to handle 12,000.

We began the task. We began without Federal assistance. But by 1979 the job was beyond our capability. We turned to the Congress for construction money under PL 95-561. Each year since, Congress has appropriated funds in recognition of the tremendous problems we have faced. In many respects, our crisis in Education in the Virgin Islands is still rooted in that court decision of seventeen years ago.

Since 1972, 77,870 non-citizen children have entered the V.I. public shcool system. This has averaged 21.3 percent of the total school enrollment. Since the Hosier decision, our local Government has spent $131 million on education for non-citizen students. Federal assistance during this period has been just short of $20 million. The Virgin Islands has stood up to the challenge of the Hosier ruling and extended our educational system to our large non-citizen population.

Mr. Chairman, I am grateful to the Committee for its annual assistance in building classrooms and buying textbooks for the Virgin Islands school system. I want to show you these photographs of improvements in our schools that Federal dollars have paid for. There are a lot of young people in the Virgin Islands that have had a better education because of this Committee's efforts--even when the Administration has not budgeted funds for the Territory.

I have also brought for you several photographs of schools that clearly need repair. As you can see, there is more work needed. A lot more work. There is no way to photograph our shortage of classrooms. There is now way to photograph our teacher shortage.

Non-citizen students are expected to be a liability over the next five years at an estimated cost of $30,000,000. This estimate is based on the current school population of non-citizen students that will be in the system through the 1990s. The Department of Education estimates that it needs $20,923,700 in FY 1987 to meet the cost of construction, renovation, and repairs. It is estimated that the Virgin Islands Government will need $8,660,000 for the next five fiscal years for school construction, renovation, and repairs.

I want to be realistic in any request to this Committee for continued assistance under Public Law 95-134. I have proposed in the attached capability statement $5 million for classroom construction and textbooks in the Virgin Islands. It is an amount that has been funded before, even though in no previous fiscal year has a Federal Administration released the full amount appropriated. We need the full $5 million this year and I have submitted a detailed statement to the Committee on how it will be spent.

The new administration of the Virgin Islands Department of Education has evaluated what has been done since the inception of the General Assistance Program and will focus primarily on the construction of new schools, construction of classrooms to existing schools, and renovation of old, delapidated classrooms in existing schools through the Territory. The previous additional objective which dealt with remediation programs for the non-citizen children in the public schools will be addressed through the consolidation federal program legislation, Public Law 95-134.

The construction and renovation agenda upon which the new administration will embark is reflective of the serious concern and commitment to resolve a recurring problem relative to inadequacy of educational facilities in the Territory.

Mr. Chirman, before I close this testimony, I have one additional item to address. New schools, new classrooms, are only as good as the teacher we have to put in them.

The teacher training provision as prescribed in Public Law 95-561 is most beneficial to the teaching profession in the Virgin Islands. The non-degreed as well as degreed individual who are teachers in the public and non-public schools of the Virgin Islands have benefited from the assistance provided through the teacher training component. The residual spin-offs from the additional training available to teachers have resulted in more teachers being certified by the Virgin Islands Board of Education to teach in their respective disciplines, and a better instructed student population.

The need to continue the Territorial Teacher Training program on a long-term basis in the Virgin Islands is most obvious because a sizeable number of teachers need to upgrade their skills. Education data indicate that approximately four hundred ninety six (496) teachers have been identified as not having baccalaureate degrees or are degreed but do not meet the minimum certification standards as established by the Virgin Islands Board of Education.

In view of the data present, the Department of Education /University of the Virgin Islands cooperative work agreement can, on average, train ninety-three (93) individuals per year from 1988 through 1993. This would meet the current shortfall in professionally prepared teachers in the system. To fund this program I am requesting the Committee appropriate $245,000 under

PL 95-561 for the Virgin Islands. You have participated in teacher training in the past and we would welcome your continuation of this Territory/Federal partnership.

Mr. Chairman, education -- a good education -- is one of the most important gifts we can give our children. The Virgin Islands has had one of the toughest assignments of any government under the United States Flag -- integration of 77,000 non-citizen students into its school system. With your continued support, we can provide the facilities, the textbooks, and the teachers to meet the challenge.

CAPABILITY STATEMENT

Agency/Bureau:	U.S. Department of Education
Fiscal Year:	FY 1988
Appropriations:	Office of the Secretary
Activity/Subactivity:	Virgin Islands General Education Assistance
Proposed Amendment:	$5,000,000 for Capital Improvement Projects, and Curriculum, Text Books, and Instruction
Current Program:	This program currently supports construction, renovation, and remodeling of schools in the U.S. Virgin Islands as well as the ASBESTOS ABATEMENT Project. During the past fiscal year, some of the projects undertaken were roof repair, classroom construction, and installation of fire and alarm security systems.
Amount Budgeted, FY 1988:	None
Feasibility:	Funds will be used primarily on the construction of new classrooms, renovation of old classrooms and buildings, and the acquisition of curriculum materials and supplies.
Capability:	Funds will be used as follows:

DISTRICT OF ST. CROIX

Capital Improvement Project

Juanita F. Gardine Elementary School Replacement eleven (11) plywood classrooms Construct five-classroom wing - East/West	$1,230,000

	Theodore Dunbavin Elementary School Construct new two-classroom building	140,000
	Eulalie R. Rivera Elementary School Construct four (4) classrooms	280,000
	Claude O Markoe Elementary School Replace N.A.S.A. Trailer with new four-classroom building	300,000
	Elena L. Christian Junior High School Conversion of seven classrooms into seven (7) vocational shops and science laboratories	300,000
	SUBTOTAL	2,250,000
	DISTRICT OF ST. THOMAS/ST. JOHN St. Thomas Schools	
	Peace Corps ELementary School Construction of six (6) classrooms	450,000
	Joseph Gomez Elementary School Construction of fourteen (14) classrooms	1,480,000
	SUBTOTAL	1,930,000
	St. John's Schools	
	Julius E. Sprauve School Construction of five (5) classrooms	350,000
	SUBTOTAL	2,250,000
	Curriculum and Instruction Textbooks, materials and supplies	500,000
	TOTAL	$5,000,000
Outlay Effect:	$5,000,000 FY 1988	

CAPABILITY STATEMENT

Agency/Bureau: U.S. Department of Education

Fiscal Year: FY 1988

Appropriations: Office of the Secretary

Activity/Subactivity: Virgin Islands Territorial Teacher Training Program

Proposed Amendment: $245,000

Current Program: The Territorial Teacher Training Program conducts assessments of needs of non-degree and non-certified teachers in the private and public schools, desseminates information regarding the requirements for eligibility, works with the University of the Virgin Islands to provide neededcourses in a degreed program and provides counseling and assistance to participants.

Amount Budgeted, FY 1988: None

Feasibility: The Territorial Teacher Training Assistance Program will continue its efforts to:

- assess needs of non-degreed and non-certified teachers
- maintain records of participants of TTTA Program
- disseminate information regarding TTTA Program
- coordinate and facilitate the University of the Virgin Islands in making its programs relevant to the needs of TTTA Program participants.

Capability: Funds will be used as follows:

Personnel	$ 10,239
Fringe Benefits	1,848
Travel	3,832
Equipment	1,882
Supplies	4,800
Contractual	205,000
Construction	- 0 -
All other operating expenses	17,399

Outlay Effect: $245,000

BIOGRAPHY OF HON. LINDA A. CREQUE

Linda Ann Creque, is Commissioner of Education for the United States Virgin Islands having been appointed to that position by Governor Alexander A. Farrelly, on January 7, 1987.

She received her BS and MA in Education from Queens College, City University in New York and her Ph.D. from the University of Illinois, Champagne-Urbana.

She taught, gifted children in New York City and was chosen as one of ten teachers to participate in an exchange program in Puerto Rico called "Operation Understanding."

After moving to St. Thomas, she was appointed as a fourth grade teacher at the then Nisky Demonstration School, where she worked to establish special enrichment programs including a program with New York University to provide after school tutorial and remedial instruction for students.

In 1970, Dr. Creque became the Educational Coordinator for Project Head Start and its Acting Director in 1973.

She left Head Start in 1973 to implement the first Open-Classroom K-3 school for the Department of Education. It was the first school in the territory to institute the Early Prevention of School Failure Program, Project Catch-up as well as weekly staff training sessions and shared decision making policies.

In 1979, as the chairperson of the Professional Development Committee for the Administrators Association she helped to organize a joint effort with the Department of Education, the University of the Virgin Islands and the University of Illinois to establish a doctoral program for Virgin Islands Educators.

In 1980, Dr. Creque was appointed as the Principal of Joseph Sibilly School and in 1986, the school received an Excellence in Education Grant Award and presently is involved in pilot writing and math programs.

Dr. Creque has been a member of the League of Women Voters, the Association of Supervision and Curriculum Development, the Council of Teacher of English and other civic and professional organizations.

She is also a member of various National Honor Societies including Phi Kappa Phi, Delta Kappa Pi, Phi Delta Kappa and has been a recipient of several awards including the Virgin Islands Council of the Arts, the Community Education and Training Program, the Virgin Islands Cultural Endowment Program and the Deans Award, University of Illinois.

Dr. Creque is married to Leonard Creque and has two children - Leah and Michael.

Senator INOUYE. I think this committee would be most interested to know, because that seems to be a rather high percentage.

What is your population figure for the Virgin Islands?

Mr. DE LUGO. The population is approximately 110,000.

Senator INOUYE. So about 27,000 are students?

Mr. DE LUGO. Yes.

Senator INOUYE. On the basis of 30 to 1, you have about 1,000 teachers. Are you telling this committee that one-half of your teachers are not certified?

Mr. DE LUGO. It was my understanding that this figure represented all of the territories.

Senator INOUYE. I can assure you that we will do our best to bring this down to a more reasonable number. I think it is tragic if such a large percentage of your teachers are not certified to teach.

Mr. DE LUGO. I would agree with the chairman.

Senator INOUYE. You can be assured of my support, sir.

Mr. DE LUGO. Thank you very much.

Senator INOUYE. Thank you very much.

Our next witness is one that all of you have been waiting for and all the cameras have been waiting for. We are pleased to have with us a very distinguished American who will speak on behalf of the Juvenile Diabetes Foundation. You have seen her in many civic endeavors, and you have seen her on the screen. I am pleased to welcome Mary Tyler Moore.

Ms. Moore, it is a thrill for all of us to have a real celebrity among us.

STATEMENT OF MARY TYLER MOORE, INTERNATIONAL CHAIRMAN, JUVENILE DIABETES FOUNDATION

ACCOMPANIED BY MICHAEL ROMANSKY, ESQ., COUNSEL TO JUVENILE DIABETES FOUNDATION

Ms. MOORE. Mr. Chairman, thank you. It is a thrill for me to be here, believe me.

It is a privilege to appear before you to discuss fiscal year 1988 funding for the National Institutes of Health. Accompanying me today is Michael Romansky, Washington counsel to the Juvenile Diabetes Foundation.

Senator INOUYE. Welcome, sir.

Ms. MOORE. I appear before you today as international chairman for the Juvenile Diabetes Foundation, a voluntary health organization which has raised over $37 million for diabetes research since 1971.

I choose to work as a volunteer for this organization because of JDF's unwaivering commitment to the proposition that through research we can cure diabetes and improve the quality of life of the diabetic. I appear before you as a taxpayer concerned with the economic drain of diabetes on our economy, estimated to be about $13 billion per year. I appear before you as a person with diabetes diagnosed 21 years ago.

When JDF presents its case to this committee, we know that we are preaching to the choir. When JDF was founded 16 years ago, there was no Federal diabetes research program to speak of. A decade ago this committee had the courage and foresight to direct NIH to implement the National Commission on Diabetes' long-range plan to combat diabetes. We now have a comprehensive and multifaceted research prevention, education and control program that has come into its own as a model for biomedical research and many times emulated as a model for biomedical research in attack on other major health problems.

You heeded our call and provided funds for diabetes research, over $1.3 billion since 1974. Your investment has paid off with enormous dividends. We can point to major success in the treatment of this Nation's diabetics. Unlike a decade ago, we now have a reasonable basis for being optimistic about a cure and prevention of this insidious disorder.

With Federal research dollars, scientists have isolated a virus that triggers diabetes leading to the possibility of a preventive vaccine.

With Federal research dollars, scientists have made it possible for the majority of diabetic women to have normal pregnancies for the first time.

With Federal research dollars, millions of diabetics are benefiting from new drugs and new ways of taking insulin. Because of Federal research dollars, diabetics can now avail themselves of laser coagulation therapy to treat diabetic retinopathy and significantly reduce the risk of blindness. Now, this breakthrough is particularly important to me, as I have recently received this treatment myself.

With Federal research dollars, scientists have initiated clinical trials in which humans are undergoing pancreatic eyelid cell transplantation. Utilizing the same technology, investigators have actually cured diabetes in animals.

This is why we are here, Senator, to achieve the promise of a cure, to eradicate a disease which is a leading cause of death, blindness, heart disease, kidney failure and neurological disorders, to continue to provide hope for this country's 12 million diabetics and their families.

The National Diabetes Advisory Board is about to issue its revised long-range plan. I have had an opportunity to review the executive summary to the 1987 plan. What we now have is a blueprint for a cure. JDF believes that funding at our recommended levels, the 20-percent increase in NIH funding that is supported by over 150 health organizations, would provide the impetus for commencing implementation of a number of the significant elements of this plan, including the establishment of several diabetes interdisciplinary programs and a special initiative in kidney disease-related diabetes research.

Are you aware that the Federal Government is spending $330 million each year providing dialysis treatments to diabetics suffering kidney failure or 50 percent more than we are spending to cure an underlying cause of end stage renal disease; that is, diabetes?

Ten years from now, will we feel a great sense of reward because the research advances funded today have yielded a cure for diabetes, or will we look back over a long line of opportunities foregone and a diabetes program which failed to attain its mission for want of adequate Federal support? Will we need another long-range plan to combat diabetes?

PREPARED STATEMENT

We hope that once again this committee will ignore the expedient and do what you know in your hearts is right by providing a 20-percent increase in funding for the National Institutes of Health and for diabetes research. There is a cure, and together we will find it.

[The statement follows:]

STATEMENT OF MARY TYLER MOORE

Summary of Recommendatons:

The Juvenile Diabetes Foundation International recommends that, for FY 1988, the National Institutes of Health be appropriated $7.4 billion (a 20% increase over the FY 1987 funding level). The National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK) should be appropriated $654 million; the National Heart, Lung, and Blood Institute (NHLBI) - $1,116 million; the National Institute of Child Health and Human Development (NICHD) - $440 million; the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) - $588 million; the National Institute of Allergy and Infectious Diseases (NIAID) - $654 million; and the Division of Research Resources (DRR) - $387 million.

We also recommend that $8.6 million be appropriated for the Centers for Disease Control's State Diabetes Control Projects and that the Indian Health Services be appropriated $3.5 million to operate the Model Diabetes Care Program.

The Juvenile Diabetes Foundation International (JDF) appreciates this opportunity to present its views regarding FY 1988 appropriations for the National Institutes of Health and other federal diabetes programs. JDF is an international voluntary health organization of over 160 chapters throughout the U.S. and the world dedicated to furthering research in diabetes and improving the quality of life of the diabetic.

A DECADE OF REMARKABLE PROGRESS.

Twelve years after the federal government embarked in earnest to implement the Long Range Plan to Combat Diabetes, it is an appropriate time to evaluate the strides mede in eradicating this major national health problem. In 1975, there was no federal diabetes initiative to speak of -- little funding and no infrastructure. The biomedical research community's commitment to diabetes research could be characterized by a benign neglect of a disease which wreaked havoc upon virtually every body system -- the eyes, the heart, the kidney, the nervous system -- draining the spirit and resources of young families facing life with a child with an incurable chronic disease and sapping the economy of billions of dollars in health care and lost productivity.

Several of you who served on the Appropriations Committee at that time heard our message. This Committee and the Congress created the National Commission on Diabetes, which, in 1975, issued the Long Range Plan to Combat Diabetes (Long Range Plan). This Plan provided a blueprint for a major research onslaught on diabetes. The Congress directed NIH to create a multi-faceted research, prevention, education, and control program that has come into its own, a model for biomedical research and many times emulated to attack other major health problems.

Commencing with the publication of the Long Range Plan, you heeded our call and provided funds for diabetes research -- over $1.3 billion since 1975. The investment you made has paid off in enormous dividends. We can point to major success in the treatment of this nation's diabetics. And, unlike a decade ago, we now have a reasonable basis for being optimistic about a cure and the prevention of this insidious disorder.

The NDAB's 1987 revised Long Range Plan chronicles the remarkable research progress made in just a decade, all advances coming as the result of federal research dollars:

*Isolation of a virus that triggers diabetes.

*Identification of genetic markers of diabetes.

*Production of human insulin by recombinant DNA technology.

*Laser photocoagulation to treat diabetic retinopathy and reduce the risk of blindness.

*Identification of the role of abnormal maternal metabolism in the increased incidence of birth defects and the development of strategies for pregnant women with diabetes that improve metabolic control and prevent birth defects and early infant mortality.

*Improved methods for measuring and regulating blood sugar in diabetics, like home glucose monitors and the insulin pump.

*Clinical trials in which human subjects are undergoing pancreatic islet cell transplantation, following demonstration by scientists that islet cells from healthy rats transplanted into diabetic mice actually reversed the diabetes in mice. The NDAB states that: "The potential for curing diabetes using pancreas transplants, islet transplants, or an implantable artificial pancreas is real."

AT THE CROSSROADS: A CRISIS YET UNRESOLVED.

As discussed above, Congress' willingness to invest in the Long Range Plan has yielded remarkable dividends in terms of ameliorating the human suffering from the scourge of diabetes and providing the potential for a cure. Despite the cause for optimism in diabetes research, the specter of diabetes and its devastating complications is pervasive. In the United States, diabetes remains a leading cause of death, blindness, end stage renal disease, neurological disorders, heart disease, and fetal mortality.

The revised Long Range Plan also expounds a tale of a disease with staggering economic dimensions. A conservative estimate of the total annual direct costs attributable to diabetes is $13.8 billion. Annual savings of $454 million in the national costs of care for the blind can be realized through the use of laser therapy in advanced cases of diabetic retinopathy. The annual hospital costs for amputations related to diabetes exceed $350 million. The annual Medicare costs for diabetes-related kidney disease is more than $330 million, a number which is expected to double in the next decade as diabetics will account for more than one-half of all ESRD patients. To illustrate the necessity to invest in finding a cure, we need to realize that, as a nation, we are spending 50 percent more each year to dialyze diabetics than to cure them. It is estimated that every dollar devoted to research yields $13 in savings in treatment. The insulin pump, the glucometer, knowledge about tight control of glucose levels, laser therapy, and islet cell transplantion, all have shown either the actual or potential ability to save billions in treatment dollars each year.

A TIME FOR RECOMMITMENT: JDF's FY 1988 APPROPRIATIONS RECOMMENDATIONS.

Against this backdrop looms the Administration's proposed budget for FY 1988: a bleak and desolate national retreat and retrenchment from a humane and responsible health care policy. The elements of the FY 1988 plan are consistent with past proposed budgets: a 10.5 percent reduction in NIH funding (compared with research and development increases of 16 percent for the National Science Foundation, 8 percent for the Department of Defense, and 12 percent government-wide); funding of 5,000 new and competing research grants (compared with 6200 grants in FY 1987); reducing the number of approved clinical trials, thereby restricting the clinical application of new therapies; and a proposed "carryover" of $334 million dollars in FY 1987 until later years, a transparent effort to "impound" already appropriated dollars. Congress should simply reject all components of the Administration's proposed NIH Budget as "hazardous" to the nation's health.

Today, we face a major choice. The dividend from the federal investment in biomedical research -- a healthier America -- warrants an NIH investment comparable to, and even modestly exceeding, the government-wide funding increases for research and development. As we approach a major turning point in biomedical research in general and diabetes research in particular, we must make a determination as to whether we follow the path of retrenchment or the path towards capitalizing on scientific opportunity.

For us, the choice is clear. JDF recommends that Congress appropriate $7.4 billion for NIH in FY 1988, as allocated on the table of recommendations appended to this testimony. Along with over 100 scientific and voluntary health organizations, we recommend that the National Institutes of Health be funded at the levels adopted by the Ad Hoc Group for Medical Research Funding. This request represents a 19.5 percent increase in the NIH budget in FY 1988.

Under this proposed budget, NIH would fund about 7,000 new and competing research grants. The proposal would facilitate the funding of 38 percent of approved research grant applications, a first step towards achievement of an award rate of 50 percent by FY 1992. Under the proposal, all grants would be awarded at study section-recommended levels and not be subject to downward "negotiation" which embodies the potential to compromise the quality and integrity of NIH-supported research. In order to ensure program balance, all mechanisms, including training, centers, cooperative clinical research, and intramural research, would be increased by the same percentage as research project grants.

One of our greatest concerns is the need to increase biomedical research training support. As diabetics and parents of children with diabetes, we live with the profound fear that today's research advances will not be translated into a cure for lack of ified investigators to conduct the next phase of research. JDF is dedicated to the belief that we must foster a climate in which today's scientists, physicians, and indeed, medical students, will seek out a career in health research. To this end, JDF itself has supported over 250 fellowships during the past five years.

The current national research manpower problem can be gauged by examining the field of diabetes. From FY 1980 to FY 1986, diabetes research appopriations increased from $130 million to about $200 million annually. During that same period, expenditures for diabetes-related manpower programs supported by the NIDDK have decreased from $7.4 million to $6.1 million and the total number of individuals supported has declined by 33 percent, from 312 to 214. Funding at our recommended levels would enable NIH and NIDDK to implement the research manpower training recommendations embodied in the 1987 Long Range Plan.

The provision of funding for the National Institutes of Health at the levels recommended by Ad Hoc Group for Medical Research Funding, including our recommendation of $654 million for the National Institute of Diabetes and Digestive and Kidney Diseases, would enable NIH to commence implementation of the more significant recommendations of the National Diabetes Advisory Board's Long Range Plan:

Diabetic Kidney Disease. As discussed above, kidney disease is a significant cause of death and disability for individuals with diabetes and a monumental drain on the American economy. Studies during the past decade have demonstrated that some of the early changes in kidney function can be reversed or prevented by strict control of blood glucose levels and by treatment of kidney infections and hypertension. The NDAB and the Task Force on Kidney Disease of Diabetes Mellitus have identified a number of "future directions" for kidney-related diabetes research. Ample funds should be afforded NIDDK's Division of Kidney Diseases to capitalize on these opportunities.

Interdisciplinary Research Programs. JDF supports the recommendation of the NDAB that NIDDK establish several Diabetes Interdisciplinary Research Programs. The new Programs would be designed to integrate diabetes-related research and diabetes-oriented scientists, both young and established, into existing basic science laboratories to capitalize on exciting new basic science methodologies and the attendant scientific talents for the benefit of diabetes research.

Diabetes in Pregnancy Research Centers. The National Institute of Child Health and Human Development (NICHD) supports a broad range of research relating to the effects of diabetes on maternal and child health, including three multi-disciplinary centers that focus on pregnancy in woman with diabetes. These centers should continue to receive adequate resources.

Eye Complications of Diabetes. We concur with the recommendation of the NDAB that the National Eye Institute be appropriated adequate funds to ensure completion of pending clinical trials on the devastating visual complications of diabetes.

Dental Complications of Diabetes. The 1987 Long Range Plan includes a number of important recommendations for "future directions" in the dental complications of diabetes, which include increased susceptibility to bacterial periodontal diseases, and to fungus infections of the oral mucosa, reduced salivation, and diminished ability to taste and smell. Funding for diabetes-related research at the National Institute of Dental Research should be increased in accord with our recommendations.

CENTERS FOR DISEASE CONTROL (CDC).

CDC has spearheaded a number of very significant programs designed to implement the original Long Range Plan. CDC has already evaluated and improved local patient education resources; sponsored workshops for dieticians and other members of the diabetes health care team; designed systems to identify and assimilate data on high risk diabetic population groups; and provided surveillance of diabetes registries. The cost-effective application of current diabetes treatment information is being demonstrated through diabetes control programs in 20 states, but this program has been severely hampered since its inception because of inadequate funds to fully support various intervention projects.

JDF believes that these state diabetes control programs should be adequately funded and that Congress should, pursuant to the NDAB's recommendation, establish a Diabetes Translation Center (DTC) at the CDC, to plan, conduct, and coordinate national efforts to transfer diabetes research more rapidly into patient care.

CONCLUSION.

The research which you have funded over the past decade has built upon this foundation and has yielded huge dividends in terms of reduced diabetic mortality and morbidity and reduced health care expenditures. The National Diabetes Advisory Board continues its work and has provided the Congress and the diabetes community with a revised blueprint for research, training, education and control.

Ten years from now, will we feel a great sense of reward, because the research advances funded by Congress today have yielded a cure for diabetes? Or will we look back over a long line of opportunities foregone, and a diabetes program atrophying for want of federal support?

We hope that once again this Committee will ignore the expedient and do what you know in your hearts is right.

JUVENILE DIABETES FOUNDATION: FY 1988 APPROPRIATIONS RECOMMENDATIONS[1]

in millions of $

NATIONAL INSTITUTES OF HEALTH	FY 1987 Approp.	Diabetes Dollars In FY 1987	Admin. FY 1988	JDF Recommendation
National Institute of Diabetes, Digestive and Kidney Diseases	511.1	121.3	440.5	654.3
National Heart, Lung and Blood Institute	930.0	19.5	822.0	1,116.0
National Eye Institute	216.6	21.3	186.8	259.9
National Institute of Child Health and Human Development	366.8	12.5	322.0	440.2
National Institute of Neurological and Communicative Disorders and Stroke	490.2	8.5	423.2	588.2
National Institute of Allergy and Infectious Diseases	545.5	7.2	551.1	654.6
National Institute on Aging	176.9	2.6	156.2	212.3
National Institute of Dental Research	117.9	4.5	108.1	141.5
National Instute of General Medical Sciences	570.9	2.5	482.1	685.1
National Institute of Environmental Health Sciences	209.3		198.5	251.2
National Institute of Arthritis, Musculoskeletal and Skin Diseases	138.7		123.0	166.4
National Cancer Institute	1,402.3		1,302.8	1,570.6
Division of Research Resources	322.9	16.1	263.3	387.5
National Library of Medicine	61.8		64.4	74.2
John E. Fogarty International Center	11.4		9.7	13.7
Office of the Director	56.7		59.8	68.0
Buildings and Facilities	31.9		5.0	38.3
TOTAL NIH	6,200.0	217.7	5,516.5	7,440.0

[1] Figures in columns may not foot because of rounding.

* * *

Centers for Disease Control Diabetes Control Project	7.2	(7.2)		8.6*
Indian Health Service Model Diabetes Care Program	2.9	(2.9)		3.5

*Additional funds will be required.

Senator INOUYE. Ms. Moore, I thank you very much. You have touched upon an aspect of health that is very important to this subcommittee. We have been trying our best to do exactly what you have been suggesting.

It is a sad set of statistics. We spend 50 cents per person in the United States for preventative medicine but $1,440 per year for curative medicine. We know very well that if we just added a few more dollars to your endeavor, we can wipe out diabetes in a few decades.

I think the record should show that we have been fortunate to have had the leadership of Senator Weicker. He has been in the forefront in doing what is physically and medically possible to rid ourselves of this disease, and I think we are equally fortunate to have Senator Chiles, who is now in charge of this subcommittee. Although he has also another responsibility as being the chairman of the Budget Committee where you have to cut, this one will be increased.

So congratulations.

Ms. MOORE. Thank you, sir.

Senator INOUYE. Thank you very much.

[Applause.]

Senator INOUYE. We are also fortunate to have with us a young but well-known and distinguished citizen who is here to speak on behalf of the American Heart Association. He travels a long distance to be with us, Mr. Robby Benson.

This is celebrity day. Mr. Benson, I thank you very much, and I think I should say on behalf of all of those who have heart problems, and most politicians do, we thank you for your participation this morning.

STATEMENT OF ROBBY BENSON, AMERICAN HEART ASSOCIATION

ACCOMPANIED BY DR. KENNETH SHINE, DEAN, UCLA SCHOOL OF MEDICINE AND PRESIDENT, AMERICAN HEART ASSOCIATION

Mr. BENSON. Thank you very much. It is really an honor to be here.

Dr. SHINE. Mr. Chairman, I am Dr. Kenneth Shine, dean of the UCLA School of Medicine and president of the American Heart Association appearing with Mr. Benson. We wish to thank you for the opportunity to appear before your subcommittee and make some general remarks about the National Heart, Lung, and Blood Institute and then ask Robby to relate his own experiences in relation to cardiovascular science.

Heart disease, stroke and related disorders account for almost as many deaths as all other causes of death combined. This means that one out of every two Americans die of cardiovascular disease. That is also why the American Heart Association cookbook has been distributed widely in the Congress as well as everywhere else.

In 1987 alone, the cost associated with cardiovascular disease is estimated to be $85.2 billion for physician and nursing care, hospital and nursing home services, medications and lost productivity due to disability. Our ability to combat cardiovascular disease directly correlates with the level and quality of overall support of basic and clinical research in prevention efforts in which the Heart Association has pioneered.

The President's budget proposals for fiscal year 1988 of the NIH and the NHLBI in particular are inadequate. The President has proposed an overall decrease for the NIH of 10.5 percent and an 11.7-percent decrease for the NHLBI. The President has requested $821.9 million in new budget authority for the NHLBI for fiscal year 1988. This is $108 million below what the institute received in fiscal year 1987.

Another major concern of ours is the level of support of the Heart, Lung, and Blood Institute in comparison to other institutes. Although the Heart, Lung, and Blood Institute received an increase in its fiscal year 1986 budget, it ranked 11th out of 12 institutes in the percentage of that increase.

The research areas under the NHLBI umbrella include most of the leading causes of death in the United States, and we believe that the allocation of funds among the various institutes here reflect this fact.

The research, prevention and education programs in the NHLBI and the Heart Association have made significant strides in the effort to combat cardiovascular disease. Over the last two decades, the death rate from coronary disease has declined by 40 percent and from stroke by 52 percent. However, the future holds the potential for even greater progress. The American Heart Association, therefore, respectfully recommends that the NHLBI receive a fiscal year 1988 appropriation of $1,160,000,000, or an increase of approximately 20 percent.

We are very grateful that Mr. Benson could be with us today. Mr. Benson is currently starring in and directing a picture on drug abuse in New York and was good enough to come down from that production to tell us about his own experience.

Mr. Benson.

Mr. BENSON. Thank you. I have been involved in the arts for most of my life as an actor, a writer, a composer and currently as a director. I have always been very physically active. I enjoy long distance running, basketball, all sports, and have portrayed athletes in seven motion picture productions.

In view of my very active lifestyle, it came as a considerable shock to me to learn that I had been born with an abnormal bicuspidal aortive valve which was leaking.

Cardiologists were able to follow the function of my heart very carefully using the technique of echocardiography. This allowed them to sensitively and accurately determine when the heart muscle began to tire.

In 1984 the echocardiogram showed that the heart muscle was having difficulty, though I was still very active. Shortly thereafter I began to feel that I did not have the same stamina that I used to have. I underwent a heart catherization which confirmed these changes, and later that year an artificial heart valve was inserted.

Since that time, I have been able to return to full-time activity and employment. I have resumed my program of vigorous physical activity, I am married, and I am a very, very happy, proud father.

Many times during my diagnosis and treatment, I received the benefit of heart research. The development and application of the diagnostic equipment, the research which allowed my doctors to determine when the heart had begun to weaken, the techniques of open heart surgery and valve replacement, all of which I received were supported by NIH research.

As Dr. Shine mentioned, the mortality rate of heart disease has fallen almost 40 percent in the last two decades. Each year, almost 1 million people in the United States are going to die from heart disease and stroke. If the research and the treatment advances which led to this decline had not taken place, another 600,000 people would be dying each year.

I am one of the lucky ones that continues to be healthy. I am happy. I am productive. Hopefully I am contributing in some way to society and always to my family, but it is a direct result of NIH research.

I urge you to help the American Heart Association and the National Institutes of Health in their winning battle against heart disease by continuing your strong support of heart research. The nearly 20-percent increase in the budget of the National Heart, Lung, and Blood Institute is to continue the support of the grants, the research training and the clinical trials which are so important to all of us.

There are special needs for funds for research equipment and research construction. We must support the new initiative in molecular biology which would provide clues to the development basis of heart disease and perhaps allow us to identify and prevent the factors which led to the type of congenital heart valve problem which I have encountered.

The institute's commitment to public and professional education is also one in which I deeply believe. The efforts to keep people healthy with proper diet, exercise, cessation of smoking and blood pressure control will be substantially strengthened by the ongoing and new educational programs of the NHLBI.

PREPARED STATEMENT

Thank you so much for your support of the National Institute of Health in the past and for what I know will be very strong support this year and in the future.

[The statement follows:]

STATEMENT OF KENNETH I. SHINE

I am Dr. Kenneth Shine, Dean of the UCLA School of Medicine and President of the American Heart Association (AHA). The AHA is one of the world's largest voluntary health organizations. We have active organizations in all 50 states and in Puerto Rico. Over two million volunteers join with the AHA each year to carry out its mission -- the reduction of premature death and disability from heart disease, stroke and related disorders. In accomplishing this goal we work closely with Federal research, education and prevention programs, whose goals are similar in nature. Since 1948, the AHA and the National Heart, Lung and Blood Institute (NHLBI) have been active partners in the battle against cardiovascular disease, this nation's leading cause of death. We thank you for the opportunity to appear before your Subcommittee to make our FY 1988 funding recommendations for the programs of the NHLBI.

Heart disease, stroke and related disorders account for almost as many deaths as all other causes of death combined. That means one out of every two Americans die of cardiovascular disease. Of the current U.S. population of approximately 236 million, over 63 million suffer from some form of these diseases -- over 57 million Americans have high blood pressure, 4.8 million have coronary heart disease; and over 1.9 million individuals have suffered a stroke. The cost associated with cardiovascular disease is astronomical. In 1987 alone, this cost is estimated to be $85.2 billion for physician and nursing care, hospital and nursing home services, medications, and lost productivity due to disability.

Our ability to combat cardiovascular disease directly correlates with the level and quality of overall support of basic and clinical research and prevention efforts. Our organization continues to commit a larger portion of its resources towards research, however, we cannot have an impact on the morbidity and mortality due to heart disease on our own; adequate funding of the Federal biomedical research effort is necessary. The President's budget proposals for FY 1988 for the National Institutes of Health (NIH), and the NHLBI in particular, are highly inadequate. The President has proposed an overall decrease for the NIH of 10.5 percent and an 11.7 percent decrease for the NHLBI.

Prior to discussing the impact of the President's FY 1988 budget proposals on the programs of the NHLBI, I would like to address several concerns we have regarding the Institute's current fiscal year budget. An overriding concern is the level of support for the Institute as compared with other institutes. Although the NHLBI received a healthy increase over its FY 1986 budget level, the NHLBI increase ranked 11th out of 12 institutes. The research areas under the NHLBI umbrella include most of the leading causes of death in the U.S. We believe that the allocation of funds among the various NIH institutes should reflect this important fact.

Another concern in FY 1987 is the unanticipated increase in the average cost of research grants. This cost increase includes higher equipment, personnel and patient care costs -- factors over which the NHLBI can exert little control. Because the Institute sponsors so much clinical research, these costs cannot be avoided. In FY 1987, the discrepancy between NHLBI's estimated average cost of grants and the actual average cost has required a 10 percent downward negotiation, or reduction, in new and competing research grant awards made to investigators. In FY 1986, many of these same investigators received a 6.5 percent reduction in their awards. Not only is it becoming difficult to conduct research in this climate, but the negative signal is being sent to potential future investigators that federal support for their chosen research field is dwindling.

And finally, the manner in which the Office of Management and Budget (OMB) apportions funds to the NIH is still of major concern. OMB continues to apportion funds to the NIH, rather than to the individual institutes, by fourteen separate budgetary categories. In a recent report to Congress, NIH Deputy Director William Raub indicated that this system "decreases the flexibility of the individual institute directors to move funds between mechanisms without approval at a higher level." It is our understanding that NIH has recommended to OMB that it is their preference to return to the traditional apportionment process (prior to August 1985), whereby funds are apportioned to individual institutes by calendar quarter with no level of detail below the appropriation level. AHA fully supports this recommendation. We believe that OMB does not have the scientific expertise and outlook to be making decisions regarding funding for the biomedical research programs of the institutes. These decisions should be made by the individual institutes and their advisory councils with input from the biomedical research community.

The President's FY 1988 budget would significantly alter the programs and planned research initiatives of the NHLBI. As you well know, the proposed budget included a proposal for the "extended availability of appropriations" from FY 1987 for use in FY 1988, which has now been abandoned. We were encouraged by this decision, however, the loss of these dollars in the FY 1988 budget and no forthcoming modification of the budget request by the Administration has created much uncertainty as to the ability of the NHLBI to carry out its mandated research programs in the coming fiscal year.

The President has proposed $821.9 million in new budget authority for the NHLBI for FY 1988. This is $108 million below what the Institute received in FY 1987, or an 11.7 percent decrease in funding. Because the Administration has refused to modify its FY 1988 request, under the present dollar levels requested, NHLBI would be able to award only 171 new and competing research grants in FY 1988 as compared with 966 new and competing grants in FY 1987. This is a totally unacceptable level of awards.

If the Institute were to fund 807 research grants as proposed in the budget, an additional $116.5 million would be necessary. Additionally, the average cost of grants included the FY 1988 budget, we believe, has been somewhat underestimated by the Administration. If one assumes a more realistic average cost for grants in FY 1988, an additional $137.2 million would be necessary to fund 807 grants. However, funding 807 new and competing research grants in FY 1988 is an unacceptable award level as well; this would be 151 fewer awards than were made in FY 1987.

Other troubling aspects of the President's FY 1988 proposed budget for the NHLBI include:

o No increase for most research programs -- the total obligational authority of the Institute increases primarily because of an increase in the AIDS program. While research into the cause, cure and prevention of AIDS must continue, other research efforts within the NHLBI must not be put on hold. Increases requested in the centers and contracts lines of the Institute's proposed budget are for AIDS only.

o Large cuts in research awards -- Competing and noncompeting research grants awards would be subject to large downward negotiations (possibly 16 percent or greater) because the FY 1988 estimated average costs remains the same as it is in the 1987 revised budget proposals.

o Level funding for training -- the number of full time training positions would remain the same as in FY 1987.

o Shared research facilities funds are proposed to be eliminated -- this would have severe consequences for a new NHLBI initiative in molecular biology.

In addition to the above, the President has proposed an "advanced appropriation" for the National Institutes of Health of $2.7 million "to meet future year commitments generated by 1988 new and competing project grants." NHLBI's share of this appropriation is $452.5 million. We believe that this is simply a rehash of the OMB's forward-funding proposal of two years ago which was ruled unlawful by the Comptroller General and subsequently rejected by Congress. We urge you to reject this year's forward-funding proposal as well.

The American Heart Association respectfully recommends that the NHLBI receive a FY 1988 appropriation of $1,116,000,000. This level of funding constitutes a 20 percent increase over the NHLBI's FY 1987 budget. Such an appropriation would allow for the funding of 1,092 new and competing research grants, at study-section recommended levels; 15 additional Specialized Centers of Research (SCORs); the funding of an additional 557 training positions for the Institute, which is an attempt to restore this program to its FY 1984 and 1985 levels; and modest growth in the level of research career awards, research contracts, intramural research, the research management and support function and funds for facilities construction and renovation.

Exciting cardiovascular research areas planned by NHLBI in the coming year, which are, of course, subject to the level of available appropriations, include the following:

o research in human populations to determine the extent to which the results of animal studies of lipoprotein can be applied to humans; dietary effects in well defined groups, including minorities, are proposed to be investigated.

o identification of the factors involved in the physiology and biochemistry of normal blood pressure regulation in pregnancy will help resolve questions about proper patient treatment and effective prevention strategies.

o research aimed at identifying the basic mechanisms of the beneficial effect of omega-3 fatty acids on thrombosis and coronary heart disease.

o a limited clinical study of implantable, electromechanically powered (tether-free) ventricular assist device for two-year reliability.

o a large cooperative research project on the development of atherosclerosis in young adults.

Two particular program areas that we would like to highlight are NHLBI's new initiative in molecular biology and the current and planned education activities of the Institute.

While the application of techniques in molecular biology have produced great strides in research into cancer, immunologic disorders and neurological and skeletal muscle diseases, they are underutilized in the area of cardiovascular and pulmonary disorders. Recent advances in molecular biology include: the development of highly accurate diagnostic procedures based on the identification of genes responsible for specific disease states; the identification of genetic markers for risk of developing a disease; the production of new and/or sufficient quantities of clinically active compounds; the creation of new animal models that allow investigators to study gene regulation in developmental, physiological, cellular and molecular terms; and the development of new approaches to study differentiation, cellular interactions and the mechanisms by which hormonal and cellular factors affect gene expression. As is evident, the application of these techniques to the cardiovascular and pulmonary systems in normal and disease states holds great promise for exciting research breakthroughs.

The AHA is pleased to take some of the credit for creating intense excitement and interest in the cardiovascular community in this area of research. A grant which we received last year from the Bugher Foundation culminated in May with the announcement of research institutions that would become sites for the AHA-Bugher Foundation Centers for Molecular Biology in the Cardiovascular System. Prestigious institutions in Boston, Houston and Dallas were chosen in a rigorous and competitive process.

NHLBI's planned "Programs of Excellence in Molecular Biology" will be announced this year, with funding (subject to available appropriations) to begin in FY 1988. This program will consist of multidisciplinary research units designed to integrate molecular biology technologies with cardiovascular and pulmonary research and to provide an intellectually stimulating environment for collaboration between molecular biologists and other investigators in these areas of research. Our recommended FY 1988 budget level for the NHLBI includes funds for this most important initiative.

The NHLBI's National High Blood Pressure and National Cholesterol Education Programs are prime examples of successful public and private cooperative efforts aimed at attacking important public health problems. For over 25 years, the American Heart Association has advised physicians and the public about the merits of a low-sodium, low-fat and low-cholesterol diet as a means of reducing the risk of high blood pressure and coronary heart disease. A new education initiative in blood resources, primarily related to blood donation by the public and utilization by hospitals and physicians, is planned by the NHLBI for FY 1988. The AHA is supportive of this new initiative.

The Institute's education programs are supported primarily from two budget categories: (a) research and development contracts and (b) research management and support (RMS). Since 1980, the fraction of the Institute's appropriation allocated to these two budget categories has consistently decreased -- from 15 percent in 1980 to 7.5 percent in 1987 for contracts and from 5.8 percent in 1980 to 4.5 percent in 1987 for RMS. These decreases coupled with increases in the costs of other activities supported by these two functions will make it difficult for NHLBI to support their education programs at sufficient levels in FY 1988. Our funding recommendation for NHLBI provides necessary increases for these budget categories to enable NHLBI to sufficiently fund these programs.

As the NHLBI embarks on a new path -- funding of research that will apply state-of-the-art techniques in molecular biology to cardiovascular disorders -- it does not plan to abandon its time-tested approach to research. The continued success of the NHLBI depends on the concept of program balance among the various mechanisms of the Institute. As we have expressed in the past, we are somewhat concerned that the emphasis placed by Congress and other outside parties on research project grants has led to decreases in funding for other important program mechanisms such as research centers, clinical trials and the research management and support function of the Institute.

With regard to centers, several scientific advisory groups to the Institute have recommended the creation of new centers in the areas of ischemic heart disease (expansion of current level of activity) and cardio-respiratory complications of sleep disorders. The present restriction on the number of centers (i.e., 60) prohibits the Institute from implementing such recommendations. The contract mechanism has been restricted as well. NHLBI's clinical trials, the results of which are often translated directly into cost-saving clinical practices, are funded by this mechanism. I have already addressed our concerns about the RMS function above.

The National Institutes of Health is the leading biomedical research support agency of the Federal government, and the NHLBI is clearly the largest source of support for research related to cardiovascular disease. Although the AHA has contributed more than one-half billion dollars to cardiovascular research since our establishment in 1949, we can never match, nor is it our aim to, the ability of the NHLBI to fund research.

The research, prevention and education programs of the NHLBI and the AHA have made significant strides in the effort to combat cardiovascular disease. Over the last two decades the death rate from coronary heart disease has declined by 40 percent and the death rate from stroke has plummeted by 52 percent. However, the future holds the potential for even greater progress. As our understanding of the mechanisms of cardiovascular disease at the cellular level grows so will our ability to treat and prevent future occurances of the disease. The productive research programs of the NHLBI are, and will continue to be highly dynamic in

nature and hold the potential for significantly reducing future cardiovascular health care costs. However, continued research productivity depends on sufficient support from Congress. Therefore, we urge you to adopt our recommended appropriation for NHLBI of $1.116 billion for FY 1988. We thank you for your attention to our concerns and recommendations and we would be happy to answer any questions you may have.

Senator INOUYE. I thank you very much, Mr. Benson. It is always reassuring and pleasing to have our young citizens participate in activities of this sort.

I would like to assure you at this moment that we will increase the funding for the National Heart, Lung, and Blood Institute. As you know, at the present time we have appropriated $930 million, I believe, and the amount that will be forthcoming from this committee will be very close, if not exactly on, $1,160,000,000. You can say that you have helped in this endeavor.

Dr. Shine, it may please you to know that on Christmas Eve last year I happened to for some reason come across one of your pamphlets on cholesterol. I began reading that, and I began my low cholesterol diet on Christmas Day. My cholesterol level has come down. I have lost in the process about 14 pounds, and my blood pressure today is 120 over 70.

Dr. SHINE. That is splendid, Senator.

[Applause.]

Dr. SHINE. You might be interested to know——

Senator INOUYE. Now you know why you are going to get the money. [Laughter.]

Dr. SHINE. You might be interested to know that there is some very interesting new technology that will be available this fall which will allow cholesterol levels to be determined in about 5 minutes from a finger stick at a very low cost, and we are looking forward to some new programs in October which we will be doing at the NIH to publicize that. We believe every American ought to know their cholesterol level and then, when they do the kind of wise things that you have done, be able to follow it at a relatively low cost. We think that will help a lot.

Senator INOUYE. What about the publicity that fish oil is getting now, a certain pill that you take and it will wipe out all the cholesterol?

Dr. SHINE. There is pretty good evidence that a diet which has a significant component of fish is healthy. That was actually originally discovered because of the fact that Eskimos have relatively low heart rates.

However, there is no evidence of which I am aware, convincing evidence, that the use of supplements of fish oil in the way of capsules or other kinds of supplements are necessarily beneficial. The Heart Association does not encourage the use of fish oil supplements. At the present time, we want to emphasize the notion that one ought to eat natural foods in a natural form but increase the amount of fish without necessarily taking a supplement.

Whether research in this area will document that supplements are useful remains to be seen, but we do not endorse that at the present time.

Senator INOUYE. Dr. Shine, I am most grateful to you, and Mr. Benson, thank you very much.

[Applause.]

STATEMENT OF ALFRED L. STARR, EXECUTIVE DIRECTOR, SEATTLE-KING COUNTY PRIVATE INDUSTRY COUNCIL

Senator INOUYE. Our next witness represents the Seattle-King County Private Industry Council, Mr. Al Starr.

Mr. Starr, welcome, sir.

Mr. STARR. Thank you, Senator Inouye. My name is Alfred Starr. I am the director of the Private Industry Council for Seattle and King County, WA. Mayor Royer is unavoidably out of the country this week and asked that I present his testimony in his stead. He wishes me to send you his regrets for being unable to attend in person.

Several weeks ago, Mayor Royer wrote to the committee to express his deep concern for the level of funding available this year for the Summer Jobs Program for summer youth under title IIB of the Job Training Partnership Act.

Since 1984, the JTPA summer programs have enabled us to provide jobs for up to 1,500 disadvantaged young people in Seattle. This summer we will, without additional funds, be able to support only 900 jobs for all of Seattle, a reduction of 35 percent this year.

Less than 1 in 10 of Seattle's 10,000 low-income eligible youth will be assisted with summer jobs and remedial education this June. Sixty-five percent of the lost jobs will be borne by low-income minority youth in our city.

Senator INOUYE. Mr. Starr, can you hold it for just a couple of minutes? I will be right back.

[A brief recess was taken.]

Senator INOUYE. Back on the record.

Mr. STARR. The primary cause of the problem is the $90 million reduction in fiscal year 1986 appropriations that supports this year's summer program. For years, congressional support for the summer program was well over $700 million. The program last year was supported by a $725 million appropriation. Funds already appropriated in your fiscal year 1987 budget of $750 million are now available for the summer of 1988.

Mayor Royer's concern is that the $635 million available this year is inadequate. This reduction is difficult to understand in the face of prior year appropriations and the substantially larger appropriations for next summer and perhaps beyond.

Last year Congress amended JTPA to include major remedial education efforts in our summer jobs programs. Local programs now must assess young people and provide remediation during the summer for those who are academically behind in school and are at risk of dropping out.

The point is that last year Congress asked the JTPA system to enhance the summer program with major education components that are necessary but very costly and provided $90 million less to do the job.

Mayor Royer strongly urges you to consider a supplemental appropriation of $90 million that would restore this year's summer program to last year's levels. The House Appropriations Committee has approved a supplemental of $50 million. The additional funds were not in money, however, but taken from the $750 million authorized for next summer. This action will at least offset the drastic cut this year but at the expense of jobs for disadvantaged youth next year.

If the Senate cannot support a full restoration of the program this year, the mayor is hopeful that you will agree to the $50 million increase proposed by the House Appropriations Committee.

Congressional appropriations committees have in the past been concerned about the ability of the JTPA formula to target summer money with areas of large disadvantaged populations and have in some years targeted supplemental appropriations to areas that have suffered from drastic year-to-year reductions.

Mayor Royer urges your indulgence again and encourages you to target any supplemental appropriation to those local areas that lost more than 10 percent this year and who have less than 10 percent of carryover of summer moneys from last year.

This is the end of my oral remarks. You have the mayor's complete testimony. On behalf of the mayor, I would like to again thank you for the opportunity to be here and will answer any questions you may have.

Senator INOUYE. Mr. Starr, as you are aware, this matter may well be an item in the conference between the House and the Senate.

We have also another concern, and that is if the conference is not concluded in time, summer will be upon us. So we will do our best.

As you know, the Senate came with no addition, but we will have to consider that on the floor. So we have no idea what will be the final outcome. I assure you there is a lot of sympathy for this.

PREPARED STATEMENT

Mr. STARR. Thank you very much.

Senator INOUYE. We will do our best. Thank you very much, sir.

[The statement follows:]

STATEMENT OF ALFRED L. STARR

Mr. Chairman, members of the Committee, my name is Alfred Starr. I am the Director of the Private Industry Council for Seattle and King County, Washington. Mayor Royer is unavoidably out of the Country this week and asked that I present his testimony in his stead. He wishes me to send to you his regrets for being unable to attend in person and to express his appreciation for your kind invitation to testify here today on a matter that is of vital concern to him and to our entire Private Industry Council.

Several weeks ago Mayor Royer wrote to the Committee on Appropriations to express his deep concern for the level of funding available this year for the Summer Jobs Program for disadvantaged youth under Title IIB of the Job Training Partnership Act (JTPA). The Mayor's letter concerned the dramatic reduction of summer jobs available this year for the programs administered by the Private Industry Council (PIC).

Since 1984 JTPA summer programs have enabled us to provide jobs for between 1,400 and 1,500 disadvantaged young people in Seattle. This summer we will, without additional funds be able to support only 900 jobs for all of Seattle, a reduction of 35% from last year.

Less than 1 in 10 of Seattle's 10,000 low income eligible youth will be assisted with summer jobs and remedial education this June. Sixty five percent of the lost jobs will be borne by low income minority youth in our city.

The problem is in part due to the JTPA funding formula that does not target resources well to areas with high levels of disadvantaged young people and that does not provide year to year funding stability as was intended; but the primary cause of the problem is the $90 million reduction in FY 1986 appropriations that supports this year's program. For years Congressional support for the summer program was well over $700 million. The program last year was supported by a $725 million appropriation. Funds already appropriated in the FY 1987 budget of $750 million will be available for the summer of 1988. The President requested $800 million for the summer of 1989 and the House has approved sufficient resources for JTPA in their FY 1988 budget. Mayor Royer's concern is that the $635 million available this year is inadequate and this reduction is difficult to understand in the face of prior year's appropriations and the substantially larger appropriations for next summer, and perhaps beyond.

Last year Congress amended JTPA to include major remedial education efforts in our summer jobs programs. Local programs now must assess young people and provide remedial education during the summer for those who are academically behind in school and at risk of dropping out of school. Mayor Royer strongly supports the emphasis on remediation. Every study shows that disadvantaged kids are likely to be behind in school. While students from advantaged backgrounds actually gain in knowledge over the summer, youth from disadvantaged families lose as much as a year in basic skills during the summer recess. Summer remediation tied to work can and does erode this learning loss and allows disadvantaged youth to return to school with better skills. Our programs in Seattle include remediation for those that need it and we are involved in a major demonstration to test the ability of concentrated summer education tied to jobs to improve basic skills. Without additional funds this year we will be unable to meet our commitments to the Summer Training and Education Program sponsored by Public Private Ventures and the Ford Foundation.

The point is that last year Congress asked the JTPA system to enhance the summer program with major education components that are necessary, but very costly~~;~~ and provided $90 million less to do the job.

Mayor Royer strongly urges you to consider a supplemental appropriation of $90 million that would restore this year's summer program to last year's levels. The Mayor is cognizant of the extremely difficult position Congress faces with the federal budget but views the summer jobs program as extremely important for his City and the Country. Young people are our future. We as a country cannot afford to allow our younger population to leave school and drop out of the economic mainstream of our society. The summer program with its strong basic education and remediation component is a major tool for us to keep kids in school, provide basic skills and train them for the transition to work after graduation.

The House Appropriations Committee has considered the problem of this year's Summer Jobs Program and has approved a supplemental of $50 million. The additional $50 million was not new funds, however, but taken from the $750 million authorized for next summer. This action will at least offset the drastic cut this year but at the expense of jobs for disadvantaged youth next year. The House Appropriations Committee action is a step in the right direction but still falls short of what is needed. If the Senate cannot support a full restoration of the program this year the Mayor is hopeful that you will at least agree to the $50 million increase proposed by the House Appropriations Committee.

The Congressional Appropriation Committees in the past have been concerned about the ability of the JTPA formula to target summer monies to areas with large disadvantaged populations and have in some years targeted supplemental appropriations to areas that suffered drastic year to year reductions.

Mayor Royer urges your indulgence again and encourages you to target any supplemental appropriations to those local areas that lost more than 10% this year from last year and who have less than 10% carryover of summer monies from last year. There is no justification for more than 10% carryover of summer monies when the need is so large.

You have a right to ask what the City has done in the face of a 35% reduction in summer jobs. The Mayor has asked the City Council to appropriate $110,000 from the City's emergency fund for to the summer program. This action will provide 100 jobs this summer but cannot make up for the entire loss of monies. Additional funds are urgently needed.

This is the end of the Mayor's prepared remarks. On behalf of Mayor Royer I again want to thank you for the opportunity to be here and stand ready to answer any questions you may have.

STATEMENT OF WARREN J. HAMERMAN, CHAIRMAN, NATIONAL DEMOCRATIC POLICY COMMITTEE

Senator INOUYE. Our next witness represents the National Democratic Policy Committee, Mr. Warren Hamerman.

Mr. HAMERMAN. My name is Warren J. Hamerman, and I am the chairman of the National Democratic Policy Committee, the political action committee which was founded by Lyndon H. LaRouche, Jr. and other Democrats in 1980.

I wish to thank you, Mr. Chairman, for the opportunity to testify. You stand in welcome contrast to those at the administration's Justice Department, who have recently denied Mr. Lyndon LaRouche and his associates their constitutional rights of free press and speech in large part because of his outspoken ideas on the need for a full-scale global war on AIDS.

Some at the Justice Department have defined our Constitution's guarantee of freedom of the press and illegally seized the national newspaper, New Solidarity, and the internationally renowned science magazine, Fusion, because they are vehicles through which Mr. LaRouche has addressed and warned the Nation on the threat and the policy solutions to the AIDS pandemic. We will never win the war on AIDS if a climate prevails in which scientists and policy advocates are denied the ability to present their work and proposals freely.

Those budget-cutting-minded sorts in the Reagan administration who have argued against us that it has been too cost prohibitive to fight AIDS wish to silence Lyndon LaRouche. I thank you and the committee again for setting a different example.

Since the early months of 1985, we have warned that AIDS is a species-threatening disease which is far deadlier than nuclear war. The pandemic threatens all of humanity and is a threat to our national security. We have advocated and championed a threefold policy to deal with this threat.

First, we need a Manhattan project or Apollo Program scope crash scientific research effort. We call this the biological strategic defense initiative or biological SDI because it is based upon the most advanced 21st century space age methods. We cannot fight AIDS with the biomedical equivalence of bows and arrows.

Our proposed Manhattan project crash biological SDI against AIDS will not only accelerate research in the traditional biomedical demands. The BSDI global crash research effort, in order to conquer every potential scientific barrier in sufficient time, will prioritize and massively upgrade research in newer and more advanced areas such as optical biophysics.

Second, we must impose traditional public health measures which have been historically proven to assist in slowing the spread of deadly diseases. These public health measures include universal screening, contract tracing, isolation of those capable of infecting others from those not yet infected.

Third, we must massively upgrade health care and public health programs. We need new state-of-the-art modern hospitals. We need completely upscaled sanitation programs. We need a total plan for insect eradication, especially in our Nation's tropical and poor areas, and we need new prison facilities and so forth.

The public health aspect of this program was codified in the famous California proposition 64 ballot initiative. Today, 6 months after proposition 64, more and more authorities admit directly or indirectly that Lyndon LaRouche was right. Ever since we developed our advanced science and public health war plan to fight AIDS, we have been challenged in a constant fight by those in the administration who believe that it is cost prohibitive to fight AIDS. They have fought our campaigns because we represent the center of the fight against AIDS.

It is true that it will cost a lot of money to fight AIDS. AIDS will transform the world economy drastically. The cost will be as high as Mount Everest. In a few years, we have calculated the total budget expenditures to AIDS-related areas of research, health care, preventative measures and so forth may well surpass the current level of the U.S. defense budget.

Furthermore, we must begin planning now to meet with real economic costs that may consume up to 20 percent of the national economy. Yet, we have no choice but to meet those costs. All serious scientists admit that a vaccine or cure within the next 5 to 10 years is not probable. We can turn this seeming economic crisis into its own solution if we invest in high science. Let me explain.

To date, only the Japanese have demonstrated a precise understanding of the economic importance of investing in frontier science. They invest in the manufacture of the machine tools of advanced biophysic scientific research itself.

For instance, as 1987 commenced the Japanese announced that they were embarking upon a multibillion dollar life sciences research project. The publicly stated official research budget was matched yen for yen by a policy commitment among high technology manufacturing companies to build prototype scientific instruments for biophysicist and research facilities in our Nation as well as Western Europe.

One of our Nation's senior biophysicists, a former coordinator of biophysics research in the NASA Space Program, personally told me that many American scientists among his colleagues have often been turned down by a succession of U.S. Government, military, and commercial institutions uninterested and unwilling in helping them build a prototype research instrument for an experiment. They have learned under such circumstances that they will often be assisted by an enthusiastic Japanese industrial company for the same project.

The investment in manufacturing each scientific prototype pays off handsomely if only 1 in 50 to 100 custom designed scientific instruments leads to a fruitful scientific discovery since as many as several hundred duplicates of the prototype instrument, for example $70,000 to $100,000 each, would then be marketed to scientific laboratories around the world.

The profit margin is even greater if the original prototype can be assembled from component devices; thus, a process approaching rapid technological obsolescence is fostered. Therefore, we can embark on a crash scientific program knowing that the scientific research will plow back profit into the economy to fuel the further development of the crash program.

Science and technology generate profit. As we learned in the Space Program, they provide technological spinoffs and large profit for further investment. The development of an optical biophysics industry depends on the advance of the general research frontiers rather than any particular line of research per se. This is our idea underlying the biological SDI.

In conclusion, let me emphasize that there are three and only three alternatives: No. 1, we can continue the current pay-as-you-die policy which will either bankrupt or kill us or both at once.

No. 2, there will be a selective and limited policy tilt toward some AIDS testing, some public health and a little more research money. This approach will not win the war on AIDS. It effectively amounts to the same thing as the first approach.

No. 3, the only alternative is the one advocated by Lyndon LaRouche. We must embark on a full-scale crash research and public health program. We can create the wealth necessary to pay for the program by unleashing scientific development. This is the biological SDI program.

We will not be able to defeat AIDS with bows and arrows or their technological equivalents. Even the famous molecular biology technologies of the 1960's, 1970's, and 1980's are not up to the challenge. We must advance the scientific frontiers through optical biophysics if we wish to win the war on AIDS.

PREPARED STATEMENTS

Thank you for not silencing these ideas. As my written testimony, I have submitted to the committee a special statement by Lyndon LaRouche on this subject which is entitled "AIDS Will Change the World's Economy Drastically."

Senator INOUYE. I thank you very much, Mr. Hamerman. You may be interested to know that the chairman of this committee, the Honorable Lawton Chiles, announced several days ago that he will recommend full funding for this purpose, and when the chairman recommends full funding we will get full funding.

So thank you very much sir.

Mr. HAMERMAN. Thank you.

[The statements follow:]

STATEMENTS OF WARREN J. HAMERMAN

Mr. Chairman, the following statement by Mr. Lyndon LaRouche properly situates the NDPC's call for a sane public health policy and a Biological Strategic Defense Initiative to meet the AIDS threat.

AIDS WILL CHANGE THE WORLD'S ECONOMY, DRASTICALLY

Six months after the defeat of California Proposition 64, the world is beginning to say, "LaRouche was right about AIDS, and all of his opponents were wrong." The reason that the Reagan Administration, and many others, lied about AIDS -- and they did lie, very deliberately -- was summed up by Surgeon- General C. Everett Koop's echo of former White House Chief of Staff Donald T. Regan: AIDS may be worse than the Black Death, but we can do nothing about it, because the measures which could be taken are "cost-prohibitive."

The liars' argument ran as follows: If the public ever guesses the horrible truth about this infection, they will demand massive public-health measures. Even at present levels of spread of the infection, those measures will cost the Federal and state governments tens of billions of dollars. Given the present budget crunch, and our commitment to Gramm-Rudman- Hollings, we are not going to be forced into spending that kind of money. Keep the public quiet by lying our heads off to them, and, as for the infected, they are just going to have to die.

We recall hearing that sort of argument from a government, as the "useless eaters" policy of Hitler's "right to die" (euthanasia) programs and concentration camps.

The lie could not be maintained, even for as long as six months after a massive Federal, state, and news-media campaign to defeat Proposition 64. The presence of the virus in the infected carrier's saliva greatly exceeds the concentrations in genital secretions. The number of infected persons (probably not less than 5 millions in the U.S. today) is estimated to be doubling every eight to twelve months. Similar conditions exist in western Europe. Black Africa is already a holocaust, and the spread in Ibero-America is known to be catastrophic, but with only sample measurements from a limited number of locations. The sweep of such a fatal infection, with such a horrifying doubling-rate, can not be hidden from John and Jane Q. Public for very long.

Weekly, more and more of the world's relevant experts, are saying approximately what LaRouche said to Californians in 1986. Republican presidential candidate, Senator Robert Dole, and other prominent U.S. voices, are saying now that AIDS is the number one issue of the 1988 campaign. Recently, in the Soviet bloc, the Russians who said AIDS was no problem for the Communist's world, are taking precisely those public health measures which LaRouche proposed for the West during 1985 and 1986. Poland and East Germany are moving in similar ways.

What is next? Back to Regan and Koop, who said fighting AIDS with anything more than condoms and dirty pictures given to school children was "cost-prohibitive." Now, governments which refuse to spend these massively cost-prohibitive sums, are threatened imminently with expulsion from government by a public in a lynch-mood. One way or another, the money is going to be spent.

The Everest-high cost of fighting AIDS is going to transform the economies of virtually every nation on Earth. For most, this means a grisly price to be paid. For a very sizable minority, the health-care and biological-research industries will undergo the greatest economic boom in history. The dollar flow into AIDS-related industries will reach and perhaps exceed the magnitude of the U.S. Defense budget. It will be spent, because there is no choice but to spend it.

Certain changes in the penal code are inevitable, and will probably appear soon. Sodomy and personal use of "recreational substances" will be classed as felonies, and these statutes rigorously enforced. Statutes against fornication out of wedlock, will emerge and be somewhat strictly enforced. Mandatory testing for the infection will become law, and a major flow of funds into greatly expanded laboratory facilities. Measures of isolation, including provisions for quarantine, will become strictly enforced law.

Health codes will be tightened up, and public health staffs greatly increased, for dealing with all types of infections and unsanitary conditions. Hospital facilities will be expanded as rapidly as qualified staffing can be mustered. Special AIDS hospitals and clinics will proliferate. Large quarantine and treatment centers, modelled upon the old tuberculosis sanitoria, but accomodating vast total populations, will become a new branch of the health industry.

Broadly speaking, as the infection spreads more widely outside the "risk groups," the public will demand that the money for care will be spent.

It is inevitable, that much of the care of AIDS-infected persons will be supplied by other AIDS-infected persons, until a vaccine or cure might appear. This will become a new branch of the economy, the employment of AIDS-infected to care for the AIDS-infected.

Even if we were to launch today, the so-called "cost- prohibitive" measures which should have been taken in 1985 and 1986, the time required to crank up the program implies that at least fifteen or more millions, possible ten percent of, Americans will acquire and die of the AIDS infection, most before the end of this century. The estimable institutional care of as much as ten percent of the population, is a contingency for which we must prepare, even if we begin to act properly now.

Government, with its strained budgets, and the non- symptomatic AIDS carriers, will both clamor for special factories and kindred enterprises, where non-symptomatic AIDS carriers can be productively employed, and under arrangements which permit these persons to lead lives as approximately normal as possible. The establishment of policy and public-health doctrines governing the types of industries suited for an "all- AIDS" roster, portends a new sort of industrial complex of this sort.

That will change the structure of the U.S. economy, and many other things.

Government policies must be based on the presumption that no general cure will be available earlier than ten years. Public health policy, during those ten years or so, must be based on whatever measures are needed to halt the spread from infected to non-infected, or bring it down to a virtual trickle. Ten years of unchecked spread of the infection at present rates, means the virtual biological extinction of entire nations.

Not only did the Reagan Administration, and other influentials, lie their heads off in an effect to avoid the political and economic costs of public-health measures. They refused even to offer respectable sums for the biological research upon which a cure absolutely depends. Gramm-Rudman again! That brings us to the other major economic change

AIDS will bring about: a good biologist is worth much more than his weight in gold. John and Jane Q. Public are going to force the U.S. government to spend as much on biological research as there are biologists available, and as much on whatever fancy equipment the biologists desire as can be produced. An annual budget of between $2 and $3 billions for biological research alone, is a fair estimate of saturation-levels for existing research potentials. So, we have:

1) The costs and scope of mandatory screening for the presence of the infection.

2) The massive costs of the isolation and care of AIDS- infected, and the costs incurred by the withdrawal of those isolated from the non-infected portions of society.

3) A massive expansion of public-health services.

4) The massive expansion of the capacity of the health-care system to accomodate increased patient loads, including the cost of expanding the ranks of medical, para-medical, and laboratory professionals.

5) The massive expansion of biological research.

6) The massive expansion of the prison system, including special prisons for the AIDS-infected "resident," reflecting strict enforcement of those old and new statutes activated by public reaction to the impact of the AIDS pandemic.

We must prepare for an economic impact in the order of as high as twenty percent of the national economy.

The fact that only advanced biological research could bring this gruesome pandemic to an end, will have a psychological effect on much of the population akin to that of the pre-1967 popularity of the Apollo program. The London Tavistock Institute and other Reesian engineers of the "rock-drug-sex countercultural" upsurge, will shriek like banshees, protesting against the alleged plot to introduce a "reverse paradigm-shift." Social and political life will be a surging controversy between the dionysiac fanatics of the "radical counterculture" and the majority of the citizenry turning toward highly rational, pro-scientific values.

At the very best, tens of millions of Americans will probably die as a result of the spread of the AIDS infection, with a comparable or much greater toll around the world generally. We are going to bury many dead, many more than in any war in our history. If we do not act to control the spread of the infection (by mandatory testing and quarentine), the number of dead will exceed the toll of a nuclear war between the super- powers.

On the one side, we have available the economic recovery measures to carry us to prosperity and to the conquest of Mars. On the other side, we have this hecatomb of AIDS, and the unavoidable impact this will have upon as much as twenty percent or more or our national economy. We must meet the responsibilities of the latter, without losing our grip on the brighter future we are building. At the very best, the impact we have described will probably happen, and certainly something near to what we have described; we must accept what that means for our society in practice.

My name is Warren J. Hamerman and I am the chairman of the National Democratic Policy Committee (NDPC), the political action committee which was founded by Lyndon H. LaRouche, Jr. and other Democrats in 1980. I wish to thank you, Mr. Chairman, for the opportunity to testify. You stand in welcome contrast to those at the Administration's Justice Department who have recently denied Mr. Lyndon LaRouche and his associates their Constitutional rights of free press and speech in large part because of Lyndon LaRouche's outspoken ideas on the need for a full-scale global war on AIDS. Some at the Justice Department have defied our Constitution's guarantee of freedom of the press and illegally seized the national newspaper New Solidarity and the internationally-renowned science magazine FUSION because they are vehicles through which Mr. LaRouche has addressed the nation on the threat and solutions to the AIDS pandemic. We will never win the war on AIDS if a climate prevails in which scientists and policy advocates are denied the ability to present their work and proposals freely. Those budget-cutting-minded sorts in the Reagan Administration who have argued that it has been TOO COST PROHIBITIVE to fight AIDS wish to silence Lyndon LaRouche. I thank you and the committee again for setting a different example.

Since the early months of 1985 we have warned that AIDS is a species-threatening disease which is far deadlier than nuclear war. The pandemic threatens all of humanity and is a threat to our national security. We have advocated and championed a three-fold policy to deal with this threat:

> Firstly, we need a Manhattan-Project or Apollo-Program scope crash scientific research effort. We call this the 'Biological Strategic Defense Initiative' or 'BSDI' because it is based upon the most advanced 21st century space-age methods. We cannot fight AIDS with the biomedical equivalents of bows and arrows. Our proposed 'Manhattan-Project' crash Biological Strategic Defense Initiative (BSDI) against AIDS will not only accelerate research in the traditional biomedical domains. The BSDI global crash research effort, in order to conquer every potential scientific barrier in sufficient time, must prioritize and massively upgrade research in the newer and more advanced areas of optical biophysics.

Secondly, we must impose traditional public health measures which have been historically proven to assist in slowing the spread of deadly diseases. These public health measures include: universal screening, contact tracing, isolation of those capable of infecting others from those not yet infected.

Thirdly, we must massively upgrade health care and public health programs. We need new state-of-the-art modern hospitals. We need completely upscaled sanitation programs. We need a total plan for insect-eradication, especially in our nation's tropical and poor areas. We need new prison facilities and so forth.

The public health aspect of this program was codified in the famous California Proposition 64 ballot initiative. Today, six months after Proposition 64, more and more authorities admit that Lyndon LaRouche was right.

Ever since we developed our advanced-science and public health war plan to fight AIDS, we have been challenged in a constant fight by those in the Administration who believe that it is 'cost-prohibitive' to fight AIDS. They have fought our campaigns because we represent the center of the fight against AIDS.

It is true that it will cost a lot of money to fight AIDS. AIDS will transform the world economy drastically. The costs will be as high as Mount Everest. In a few years, we have calculated, the total budget expenditures to AIDS related areas of research, health care and so forth may well surpass the current level of the Defense Budget. Furthermore, we must begin planning now to meet with real economic costs that may consume up to 20% of the national economy.

Yet we have no choice but to meet those costs. All serious scientists admit that a vaccine or cure within the next 5-10 years is NOT probable.

We can turn this seeming economic crisis into its own solution if we invest in high science. Let me explain.

Standard molecular biology, genetic engineering, and other mainline biomedical research methods, however impressive their rapid accumulation of basic facts about AIDS, have nonetheless proven scientifically unable to meet the formidable biological challenge of this disease. These mainline technologies and approaches of the 1960s, 1970s, and 1980s will soon be left in the dust, if we are to conquer AIDS. We must turn to the 21st-century advanced areas of basic optical biophysics research and spark the development of an entire new industry: the optical biophysics industry.

To date, only the Japanese have demonstrated a precise understanding of the economic importance of investing in frontier science. They invest in the manufacture of the machine tools of advanced biophysics scientific research itself. For instance, as 1987 commenced, the Japanese announced that they were embarking upon a multibillion-dollar Life Sciences research project. The publicly stated 'official' research budget was matched yen-for-yen by a policy commitment among high-technology manufacturing companies to build prototype scientific instruments for biophysicists in research facilities in the United States and Western Europe. One of OUR nation's senior biophysicists, a former coordinator of biophysics research in the NASA space program, personally told me that many American scientists have often been turned down by a succession of U.S. government, military, and commercial institutions uninterested and unwilling in helping them build a prototype research instrument for an experiment. They have learned under such circumstances that they will often be assisted by an enthusiastic Japanese industrial company for the same project.

The investment in manufacturing each prototype pays off handsomely if only one in 50-100 custom-designed scientific instruments leads to a fruitful scientific discovery, since as many as several hundred duplicates of the prototype instrument at, for example, $70,000 to $100,000 each, would then be marketed to scientific laboratories around the world. The profit margin is even greater if the original prototype can be assembled from component devices pulled literally off the shelf of the scientific frontiers of instrumentation. Thus, a process approaching rapid technological obsolescence is fostered.

Therefore, we can embark on a crash scientific program knowing that scientific research will plow back profit into the economy to fuel the further development of the crash program. Science and technology generate profit. As we learned in the space program, they provide technological spinoffs and large profit for further investment.

The development of an "optical biophysics industry" depends on the advance of the general research frontiers, rather than any particular line of research per se.

This is our idea underlying the Biological SDI.

In conculsion, let me emphasize that there are three and only three alternatives:

#1. We can continue the current PAY AS YOU DIE policy which will either bankrupt or kill us, or both at once.

#2. There will be a selected and limited policy tilt toward some testing, some public health and a little more research money. This approach will not win the war on AIDS. It effectively amounts to the same thing as the first approach.

#3. The only other alternative is the one of Lyndon LaRouche. We must embark on a full-scale crash research and public health program. We can create the wealth necessary to pay for the program by unleashing scientific development. This is the Biological SDI program.

We will not be able to defeat AIDS with bows and arrows, or their technological equivalents. Even the famous molecular biology technologies of the 1960s, 1970s and 1980s are not up to the challenge. We must advance the scientific frontiers through optical biophysics, if we want to win the war on AIDS.

Thank you for not silencing these ideas.

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As my written testimony, I have submitted to the committee a special statement by Lyndon H. LaRouche, Jr. which is part of the forthcoming Executive Intelligence Review Economic Quarterly. Mr. LaRouche's statement is entitled "AIDS WILL CHANGE THE WORLD'S ECONOMY DRASTICALLY."

STATEMENT OF MICHAEL URQUHART, PRESIDENT, LOCAL 12, AMERICAN FEDERATION OF GOVERNMENT WORKERS, AFL-CIO

Senator INOUYE. Our next witness is the president of AFGE, Local 12, Mr. Michael Urquhart. I hope I pronounced it correctly.

Mr. URQUHART. Very good. Thank you. My name is Michael Urquhart, and I am president of AFG Local 12, which represents 5,000 Department of Labor employees in the Washington metropolitan area. I am here to testify on the Department of Labor's budget for fiscal year 1988.

Let me just say in the beginning that there have been several hearings going on about mismanagement in certain of the agencies and especially MSHA where the Senate Labor Committee was carrying out an investigation. While there is obviously concern about mismanagement, I want to assure you that the Department of Labor employees are dedicated, hardworking employees. They need merely the tools to be able to do their job effectively, which is to protect and promote the welfare and interests of the working people of the United States.

I want to address three specific areas today: First, the Office of Federal Contract Compliance Programs which is in the Employment Standards Administration. Over 22 million employees in 76,000 establishments are covered by regulations enforced by OFCCP. Under the Reagan administration, much has been done to undermine the effectiveness of programs that enforce the EEO laws.

We believe that this administration made it a strategy to incapacitate the OFCCP by underfunding and demoralization through a series of staff and budget reductions, downgrades in the field investigators, reorganizations and faulty policy issuances.

Among the most glaring examples of the above are the following: First, since 1980 OFCCP has totally reduced its authorized FTE staff positions from almost 1,500 to 910 in fiscal year 1987. The President has proposed to further reduce the staff by 50 positions in the next fiscal year.

Simultaneously, the compliance with workload has increased from 2,632 to 5,152. According to management's own attorneys, less time is spent than previously on each case, and only easily identifiable violations are discovered.

Second, a series of procedure and policy changes calculated to curb the effectiveness of the field staff were instituted resulting in the transfer of most of the routine decisionmaking authority from the assistant regional administrators to the national office. The effect was a backlog on enforcement activity and a message to contractors that they had a direct line to Washington to settle their disputes.

As a result of these policies, the number of cases sent to the Solicitor of Labor for Enforcement declined 92 percent over the past 6 years, and the number of persons receiving back pay declined 88 percent over the same period.

Third, the staff in both the field and national office has been constantly under the threat of downgrades and reductions.

Fourth, while the OFCCP's budget was being steadily reduced, the budgets of the other programs in the Employment Standards Administration were growing, often at the expense of the OFCCP. Millions of dollars were routinely taken from the OFCCP's appropriated funds to finance other ESA activities, such as the development of a new computer system for the Office of Workers Compensation Program.

Fifth, there has been virtually no training for new field investigators since the OFCCP consolidated its operations in 1979 and very little training of any sort for anybody else. It appears that the OFCCP was not very interested in raising the quality of its investigations while it was increasing the quantity of them.

Sixth, cases involving the handicapped and veterans have also shown a marked decline. The drop in the ratio of violations to complaints received in both the handicapped and veterans areas can be attributed to the OFCCP's deemphasis of the importance of both these programs and the defacto limitations placed on the number of hours which are to be expended on these types of complaints.

With fewer staff people and scarcer reserves, the OFCCP made a conscious decision to focus more emphasis on the executive order side of the program and less on the handicapped and veterans programs.

We ask that you consider an increase in both staffing and budget for the OFCCP to support the increased workload. Specifically, we recommend that the OFCCP be funded at $56,080,000 and staff at 1,060 FTE's. This would be used for additional enforcement and support staff in the field offices, additional training and enhancements to the OFCCP's ADP and management information system.

The next program I want to discuss is the Office of Workers Compensation Programs. The district 25 area office of OWCP handles Federal employee claims filed under FECA. This program has been frequently criticized for delays and other problems associated with the processing of FECA claims. The backlog of cases can be directly related to the lack of sufficient claims examiners and billpayers.

After declining for a few years, the number of new cases assigned to a caseworker in each 2 week period is now rising again. As a result, employees are having to work on their own time without pay to try and keep up with the workload and meet their performance standards.

The problems are compounded by a lack of computer terminals. Currently, there are only two terminals for each unit of nine people. Some other area offices have a terminal for each employee. With their own terminal at their desk, claims examiners would be able to handle calls from the public faster and save time on typing through the use of form letters.

We believe these problems could be solved through the addition of 25 positions to the district 25 office of OWCP. Specifically what is needed are two additional billpayers per unit or a total of 12 positions and 13 new claims examiner positions.

Last, I want to discuss the Mine Safety and Health Administration. Local 12 is greatly concerned about the many problems that have surfaced concerning the Mine Safety and Health Administration. During Senate hearings, Senator Kennedy has called MSHA's record "shameful and tragic," and Senator Hatch has stated that MSHA has a history of "mismanagement, misconduct, and mistakes."

We wish to emphasize that the criticisms have been aimed at the management and administration of the program, not the inspectors, technical specialists and clerical and support staff, which have a record of doing their jobs well.

We believe that the proposed reduction of 100 positions in coal mine safety and health is unwise. Nowhere has management demonstrated its ability to eliminate 100 positions without reducing the number of inspectors or in other ways weakening the program. We urge you to restore the positions that the administration is proposing to eliminate.

PREPARED STATEMENT

Thank you very much, and I want to thank the committee for their past support for the Department of Labor's programs.

[The statement follows:]

STATEMENT OF MICHAEL URQUHART

I welcome this opportunity to testify on the Department of Labor's budget request for fiscal year 1988. My name is Michael Urquhart and I am President of Local 12, American Federation of Government Employees. I wish to address three specific programs today.

OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS

Over 22 million employees in 76000 establishments are covered by regulations enforced by OFCCP. Under the Reagan Administration, much has been done to undermine the effectiveness of programs that enforce the EEO laws. We believe that this administration made it a strategy to incapacitate the OFCCP by underfunding and demoralization through a series of staff and budget reductions, downgrades of the field investigators, reorganizations, and faulty policy issuances. Among the most glaring examples of the above are the following:

1) Since 1980, the OFCCP has steadily reduced its authorized FTE staff positions from 1454 to 910 in FY1987. The President has proposed to further reduce the staff by 50 positions in FY1988. Simultaneously, the compliance review workload has increased from 2632 in FY1980 to 5152 in FY1986. According to management's own attorneys, less time is spent than previously and only easily identifiable violations are discovered.

2) A series of procedure and policy changes calculated to curb the effectiveness of the field staff were instituted resulting in the transfer of the most routine decision-making authority from the Assistant Regional Administrators to the National Office. The effect was a back-log of enforcement activity and a message to contractors that they had a direct line to Washington to settle their disputes. As a result of these policies, the number of cases sent to the Solicitor of Labor for enforcement declined 92% from FY1980 to FY1986 and the number of persons receiving backpay declined 88% from FY1980 to FY1986.

3) The staff in both the field and national office has been

constantly under the threat of downgrades and reductions.

4) While the OFCCP's budget was being steadily reduced, the budgets of the other programs in the Employment Standards Administration (ESA) were growing, often at the expense of the OFCCP. Millions of dollars were routinely taken from the OFCCP's appropriated funds to finance other ESA activities such as the development of a new computer system for the Office of Worker's Compensation Programs.

5) There has been virtually no training for new field investigators since the OFCCP consolidated its operations in 1979 and very little training of any sort for anybody else. It appears that the OFCCP was not very interested in raising the quality of its investigations while it was increasing the quantity of them.

6) Cases involving the handicapped and veterans have also shown a marked decline. The drop in the ratio of violations to complaints received in both the handicapped (503) and veterans (2012) areas can be attributed to the OFCCP's de-emphasis of the importance of both these programs and the defacto limitations placed on the number of hours which are to be expended on these types of complaints. With fewer staff people and scarcer reserves, the OFCCP made a conscious decision to focus more emphasis on the 11246 side of the program and less on the 503 and 2012.

We ask that you consider an increase in both staffing and budget for the OFCCP to support the increased workload. Specifically, we recommend that the OFCCP be funded at $56,080,000 and staffed at 1060 FTE's. This would be used for additional enforcement and support staff in the field offices, additional training, and enhancements to the OFCCP's ADP and Management Information systems.

OFFICE OF WORKERS COMPENSATION PROGRAMS

The District 25 area office of OWCP handles federal employee claims filed under FECA. This program has been frequently criticized for delays and other problems associated with the processing of FECA claims.

The backlog of cases can be directly related to the lack of sufficient claims examiners and bill payers. After declining for a few years, the number of new cases assigned to a case worker in each two week period are now rising again. As a result, employees are having to work on their own time, without pay, to try and keep up with the work load and meet their performance standards.

The problems are compounded by the lack of computer terminals. Currently, there are only two terminals for each unit of 9 people. (Some other area offices have a terminal for each employee.) With their own terminal at their desk, claims examiners would be able to handle calls from the public faster, and save time on typing through the use of form letters.

We believe these problems could be solved through the addition of 25 positions to the District 25 office of OWCP. Specifically, what is needed is 2 additional bill payers per unit, or a total of 12 positions, and 13 new claims examiner positions.

MINE SAFETY AND HEALTH ADMINISTRATION

Local 12 is greatly concerned about the many problems that have surfaced concerning the Mine Safety and Health Administration. During Senate hearings Senator Kennedy has called MSHA's record "shameful and tragic" and Senator Hatch has stated that MSHA has a history of "mismanagement, misconduct and mistakes." We wish to emphasize that the criticisms have been aimed at the management and administration of the program -- not the inspectors, technical specialists and clerical and support staff which have a record of doing jobs well.

We believe that the proposed reduction of 100 positions in Coal Mine Safety and Health is unwise. Nowhere has management demonstrated its ability to eliminate 100 positions without reducing the number of inspectors or in other ways weakening the program. We urge you to restore the positions that the administration is proposing to eliminate.

Senator INOUYE. We have every intention to restore cuts that have been suggested by the administration, and so to that extent I hope it will be helpful.

Why do you think the administration is doing what they are doing to OFCCP, their RIF's and their downgrading and such?

Mr. URQUHART. I think they have had a consistent policy of opposing much of EEO law in the country, and that is, to give you an example by the cases that the Justice Department has taken and their disagreement with the whole affirmative action program.

So since they have been unable to eliminate the program, I believe their tactic has been to weaken it by weakening the staff support for it so that the number of cases that can be taken is reduced, the number of complaints filed is reduced, and only the most simple cases are discovered and prosecuted.

Senator INOUYE. In other words, if you are supportive of affirmative action you better beef this section up.

Mr. URQUHART. Absolutely.

Senator INOUYE. If you are against it, you should cut it out.

Mr. URQUHART. Well, I think that is what they have been doing, slowly but surely. Their own attorneys admit that only the simplest violations are found because they lack the staff resources and the time to really investigate cases thoroughly to come up with serious violations.

Senator INOUYE. Thank you very much, sir.

Mr. URQUHART. Thank you very much, Senator.

STATEMENT OF C. BRUCE CORNETT, PRESIDENT, INTERSTATE CONFERENCE OF EMPLOYMENT SECURITY AGENCIES, INC. AND DIRECTOR, MISSOURI DIVISION OF EMPLOYMENT SECURITY

Senator INOUYE. Our next witness is the president of the Interstate Conference of Employment Security Agencies, Inc., Mr. C. Bruce Cornett.

Welcome, sir.

Mr. CORNETT. Thank you, Mr. Chairman. My name is Bruce Cornett, and I am the director of the Missouri Division of Employment Security and president of the Interstate Conference of Employment Security Agencies. We appreciate this opportunity to present our views concerning fiscal year 1988 appropriations for the programs ICESSA's members administer.

As you know, unemployment insurance and employment services are paid almost entirely from Federal unemployment tax revenues. Although a surplus of funds are available in the "Employment security trust fund" account, appropriations have been studied and reduced in recent years due to concerns about overall Federal budget deficits.

In fiscal year 1987, another $400 million will be added to the $1 billion surplus which was carried over from fiscal year 1986. In short, the employment security system is one of the very rare Federal programs that is overtaxed and underfunded. We feel that this policy of using balances in trust fund accounts to borrow money for other programs is unfair to the Nation's employers and their employees that must rely on this important fringe benefit.

We understand that this subcommittee must act within the constraints of overall budget policy; however, we encourage you and other Members of Congress to consider the implications of cuts to trust funded programs where reductions have no programmatic justification but are simply driven by deficit reduction goals.

In regard to the Unemployment Insurance Program, the President's budget for fiscal year 1988 requests $1.69 billion for State unemployment insurance operations. As you know, the unemployment insurance system is experiencing serious problems due to the reductions begun in fiscal year 1982. The President's request would perpetuate this inadequate level into the next fiscal year.

The EI system is forced to do a number of things to cope with funding shortages that are short-term solutions to long-term problems. In addition to staff reductions and office closings, most States believe that they are now losing trust fund moneys at a rate greater than the cuts in administrative funds due to fewer staff devoted to tax audits, investigation of potential fraud overpayment cases and collection prosecution of established cases.

Losses to State trust funds are difficult to estimate, but it appears that budget reductions are now adding to the Federal deficit. For example, one State estimates that by leaving one position in its benefit payment control staff vacant for 9 months, it saved $15,000 in administrative costs but it resulted in a decrease of $22,000 in collections for the benefit trust fund.

In order to halt this deterioration in the unemployment insurance system, we urge you to add $100 million to the contingency category of the President's request. This action will stabilize the unemployment insurance system, improve our collection capability, and provide the protection upon which jobless workers must rely.

In regard to the employment service, the administration's budget request for ES programs in fiscal year 1988 is $665.2 million, $90 million less than the current level. We believe that the House budget offers a realistic approach to funding the national labor exchange system. It is important to emphasize the need for your support in meeting our needs for a more efficient and effective labor exchange.

We feel strongly that improvements in our automation capability can result directly in increased productivity and improve our ability to serve the growing labor force. We have made this a key issue for many years, and the problem continues to grow. We therefore encourage you to earmark $20 million for the purpose of increasing automation in the Nation's labor exchange.

Before moving to our last concern regarding the employment service, I want to emphasize strongly the need to provide adequate administrative funds for the Targeted Jobs Tax Credit Program. The $30 million provided in the fiscal year supplemental is desperately needed to support the processing of over $1.2 million retroactive requests for certification as well as to administer the regular workload.

The last item concerns immigration reform and the significant role that has been designed for the employment service, especially with regard to the employer sanctions portion of the legislation. Over the past 6 months, we have been working closely with the Immigration and Naturalization Service and Department of Labor to draft streamline procedures.

We can now conclusively emphasize there will be a need for the employment service to be annually funded by the Congress to adequately fulfill our responsibilities under law.

We strongly encourage you to request that INS and DOL submit a cost report to you as soon as possible so that the fiscal year 1988 Labor appropriations bill can contain adequate resources for employment service responsibilities under immigration reform.

Thank you, Mr. Chairman. I would be pleased to try to answer any questions you may have.

Senator INOUYE. First of all, we can assure you that we will communicate with the INS to find out what your costs will be to prepare us for the next fiscal year.

Mr. CORNETT. Thank you.

PREPARED STATEMENT

Senator INOUYE. As you are aware, the matter that you have discussed will be a subject of conference hopefully in a few weeks, and I can assure you that the strong statement that you have made will be fully considered when we enter into that conference.

Mr. CORNETT. Thank you, sir.

Senator INOUYE. Thank you very much.

[The statement follows:]

STATEMENT OF C. BRUCE CORNETT

Mr. Chairman, members of the Subcommittee, my name is Bruce Cornett. I am Director of the Missouri Division of Employment Security and President of the Interstate Conference of Employment Security Agencies (ICESA). ICESA is the organization of administrators of unemployment compensation laws and public employment services throughout the country. We appreciate this opportunity to present our views concerning FY 1988 appropriations for the programs ICESA's members administer.

As you know, unemployment insurance and employment services are paid almost entirely from Federal Unemployment Tax revenues held in the Federal Unemployment Trust Fund. Although more than adequate funds are available in the Employment Security Administration Account, appropriations have been frozen or reduced in the last year due to concerns about overall federal budget deficits.

We know that other programs with special purpose trust funds face similar problems of insufficient funding while large balances build. This policy of using trust fund monies to balance the budget is a sham. It merely masks general fund overspending or under taxation and will ultimately fail to accomplish deficit reduction. Soon, and with good reason, those who contribute to the trust fund will ask for a reduction in their taxes, pointing to large balances. Even if those taxes are not reduced and the budget were technically balanced, the federal government would continue to borrow huge sums for general fund purposes, since trust fund monies are available only for specified uses. We understand that this Subcommittee must act within the constraints of overall budget policy, however, we encourage you and other members of Congress to consider the implications of cuts to trust funded programs when those reductions have no programmatic justification, but are simply driven by deficit reduction goals.

Specific comments about FY 1988 funding levels for the major components of the employment security program are provided below.

UNEMPLOYMENT INSURANCE

The President's budget for FY 1988 requests $1.69B for state unemployment insurance operations. As we understand it, this level would provide funds for salary increases that take effect in FY 1987 but are not now fully funded and would restore funds that were cut from state integrity activities in FY 1987. However, no funds would be available for salary increases that take effect during FY 1988.

The unemployment insurance system is now experiencing serious problems, due to the reduction in FY 1987 funds. Unless supplemental funds are received, about 100 local offices and itinerant service facilities will be shut down. Permanent staff will be reduced, although it is hard to determine the number since some will be accomplished by attrition and early retirements rather than mass layoffs. Contracting the network of local offices and reducing permanent staff means that when unemployment rises again, there will be lines out the door and around the block and there will be few experienced staff to serve those waiting in line.

One of the major strengths of the UI system has always been its elasticity, however, the basic network of offices and cadre of trained staff must be maintained in order for the system to respond when unemployment rises.

In addition to staff reductions and office closings, most states believe that they are losing trust fund monies due to fewer staff devoted to tax audits, investigation of potential fraud/overpayment cases, and collection/prosecution of established overpayments. Losses to state trust funds are difficult to project, however, one state estimated that one position in its benefit payment control staff that was left vacant for 9 months resulted in a decrease of $70,000 in overpayments established and a decrease of $22,000 in collections.

In order to halt this deterioration in the unemployment insurance system, we urge you to add $100M to the contingency category of the President's request for UI to pay for salary increases in FY 1988. This action will stabilize the UI system to provide the protection that jobless workers rely upon.

EMPLOYMENT SERVICE

As part of the FY 1988 budget submission, the Administration is requesting a $90.0M ES negative supplemental from funds already appropriated for FY 1987. We recommend that you turn aside this effort, as the House has done in the Report to the FY 1987 Supplemental Appropriations bill (H.R. 1827).

The Administration's budget request for ES funds in PY 1988, is $665.M; $90.0M less than the system currently is operating with for PY 1986. We can predict major operating reductions for PY 1988 if such a cut were approved. In many areas of the country the system would be closed down. We believe that the House Budget (H.Con.Res. 93) offers a realistic approach to funding the national labor exchange system. The measure assumes an inflationary increase of 5% above the current operating level of $755.2M.

Mr. Chairman, we have made ES automation a key issue for many years and in 1985, with the support of this Subcommittee, language was made a part of the FY 1986 Labor Appropriations bill that instructed the Secretary of Labor to carefully study this entire issue and report to the Appropriations Committee no later than June 1, 1986.

The Report was finally submitted to the Congress in February of this year -- 9 months late -- but an even greater tragedy is the fact that it does not fully respond to the legislative instructions. These instructions clearly ask for not just a survey of the situation but, and I quote "... to develop recommendations (including cost estimates) necessary to ensure the most efficient and effective job matching program within each state and among the states (known as the Interstate Job Bank System)..."

We had hoped that with this information your Subcommittee and staff would have had sufficient data to determine ES automation needs and the costs associated with these needs; and, at least on an incremental basis, provide funds to the states for this purpose. In light of this situation, our organization is now planning to initiate a study that will document existing ES automation needs on a state-by-state basis. In the interim, we believe that a modest level of funds should be included in the FY 1988 Appropriations Bill for ES automation, above the level for ES operations already included in the House Budget plan, and separately identified. We further recommended that a grant application approach for specific ES automation needs be established for these funds. We encourage you to earmark $20.0M for this purpose.

Our next area of concern is for adequate administrative funds for the Targeted Jobs Tax Credit (TJTC) program. We encourage you to support $30M for TJTC Administration in the FY 1988 budget.

The last item concerns Immigration Reform and the significant role that has been designed for the Employment Service, especially with regard to the employer sanctions portions of the legislation. There will be a need for the Employment Service to be annually funded by the Congress to adequately fulfill our responsibilities under law, however we have not been able to develop precise cost estimates, because the actual procedures are still being drafted. We strongly encourage you to request that INS and DOL submit a cost report to you, as soon as possible, so that the FY 1988 Labor Appropriations bill can contain adequate resources for ES responsibilities under Immigration Reform.

LABOR MARKET INFORMATION

A vital component of the Employment Security System is the Labor Market Information program which provides data to assist the Unemployment Insurance/Employment Service operations and support state/local planners in evaluating labor market conditions.

We ask that at a minimum, the FY 1987 funding level be retained for FY 1988. We urge you to reject the Administration's proposal to cut by 10 percent the labor market information funding from Title IV-D of the Job Training Partnership Act for state and local planning. This reduction, in an already too small sum, would be extremely detrimental.

Thank you, Mr. Chairman, I will be pleased to answer any questions you may have regarding these programs.

STATEMENT OF NEWTON LAMAR, INDIAN AND NATIVE AMERICAN EMPLOYMENT AND TRAINING COALITION

Senator INOUYE. Our next witness represents the Indian and Native American Employment and Training Coalition, Mr. Newton LaMar.

Welcome, sir.

Mr. LAMAR. Mr. Chairman, I am substituting for Ms. Tiger of the Seminole Tribe. She is at the present time fulfilling her judicial duties. She was called for jury duty, so she could not appear.

My name is Newton LaMar. I have served as president of the National Tribal Chairman's Association, area vice president for 4 years for the National Congress of American Indians, and I have served as the chairman of a tribe for 16 years. As such, I served as a chairman of a board which administered a JTPA Program for three tribes.

At the present time I am employed by the Micasouki Tribe which is in southern Florida. The Micasouki Tribe is 1 of 186 groups operating Indian job training programs funded through title IV JTPA. These groups include other tribal governments, the Native Alaskan Organization, Indian groups serving our people in nonreservation areas, and one native Hawaiian group. Over 32,000 people currently participate in our title IV program.

An additional 12,000 to 13,000 Indian reservation youths get their first job experience through the JTPA summer youth programs with funds provided directly to tribes. Last summer, I might add that I had the opportunity to run such a program for the Micasouki Tribe. We had 15 youths who worked all summer out in the Everglades.

Having been a former employee of the Oklahoma State Employment Service as an interviewer and job counselor, it was quite rewarding for me to be able to work with the youth on a 1-to-1 basis to introduce them to the world of work and things that they will have to be responsible for, for the rest of their lives, punctuality and a commitment to their vocation. As a result of that summer program, five of the youths are now seeking their GED papers through the tribe. This is as a result of the JTPA Program.

There are only 32,000 people currently participating in the title IV program and an additional, as I said, 12,000 to 13,000 Indian reservation youths get their first job experience through the JTPA Summer Youth Program.

Our programs operate in very difficult economic circumstances. The Bureau of Indian Affairs estimates that unemployment affects about 50 percent of the available labor force in Indian country. Some grow as high as 90 percent, this compared with the national unemployment rate for all Americans of 6.5.

Despite these circumstances, our programs are doing a great job. Nearly one-half of the participants find jobs when they leave the programs. About 80 percent either find jobs or go on to other training or otherwise successfully complete their program activities. Our success rate has climbed steadily over the next several years. We have not been rewarded for this success. In fact, our programs have been cut time and time again not only in job training but in education and in other areas as well.

Nationally, Indian employment training and resources have been cut close to 70 percent in real dollars since 1981. For most individual grantees, the losses have been more severe. The administration has proposed still one more cut in its fiscal year 1988 budget. Its proposal would reduce the Indian title IV programs from its current level of $61.5 million to $58.8 million.

The Labor Department people say that we can go on serving just as many people with less money. Mr. Chairman, this just is not true. I can count the people we could serve at Micasouki with the money. Less money means fewer services for our tribes as well as for Indian grantees around the country.

At a minimum, we would like to ask the Congress to make available at least as much money for our title IV program as was available for the same activity the year before JTPA started in fiscal year 1983. That year we had $68.9 million to provide employment and training services under the former CETA title III Indian Program. In addition, $14.5 million was available for our summer youth programs.

We would like to make one other request concerning the funds which you appropriate for JTPA. The administration's budget called for $5.9 million for technical assistance in the program support line items. We think that a portion of this money should be used to help Indian grantees on terms that are relevant to the grantee. This means a technical assistance program that is in direct consultation with the Indian grantees, not a program that is locked away in a national TA contract over which the grantees have no say-so.

In fact, there is in the law that consultation should be obtained from the grantees or the tribes. For instance, with Labor, when the JTPA first started out they set up advisory groups which made recommendations to Labor how the program should function in Indian country. Labor refused to accept those recommendations. They disbanded the advisory council and suggested that another one be appointed with none of those that had served on the preceding council, that they could not serve on a second advisory group. When that group made its recommendations, Labor refused to accept those. As a consequence, I think for the past 18 months there has been no consultation with advisory councils at all.

You know, we have gone through this with not only Labor but the Bureau of Indian Affairs. Everybody knows what is good for the Indian but the Indian himself. Everybody has had their chance at us, and all we are saying is let us for once design a program that is serving us and that will meet our needs. Let us have some input into its design. That is all we are saying. I think the Indian people today know pretty much how programs should operate and what their needs are.

Labor Department officials have refused in any dialog with us to adopt our suggestions on technical assistance or any other subject for the past several years. This situation continues despite the explicit requirements which Congress wrote into the JTPA law which requires consultation with Indian grantees.

Thank you for giving us this opportunity to present our views, and please consider the needs of our people in your deliberations.

Senator INOUYE. I can assure you that as the new chairman of the Indian Select Committee that things will begin to change. We are in the process of setting up specialized programs that you have recommended to cope with unemployment.

I think those numbers should be repeated time and again because most Americans are not aware of the fact that the best numbers you have in any reservation is about 10 percent, which is still higher than the national 6.5. I believe the worst case is 95 percent unemployment in one of your reservations.

PREPARED STATEMENT

So we will do our best not only to restore but to add sufficient moneys so that you can carry on your program. We will do our best sir.

Mr. LAMAR. Thank you.

Senator INOUYE. Thank you.

[The statement follows:]

STATEMENT OF WINIFRED TIGER, EDUCATION DIRECTOR, SEMINOLE TRIBE OF FLORIDA

Thank you very much for giving me the opportunity to speak before you about the JTPA programs for Indian people.

At the Seminole Tribe of Florida we now receive $68,000 a year for our JTPA program. This year we will receive only $7,000 for our Summer Youth program where last year we received $31,000. That is a drastic cut when one realizes that this money must be spread among three reservations.

I cannot begin to tell you the good that this program has done to keep students in school, to give single mothers the opportunity to learn a vocation and to assist those without a high school education to obtain their GED so that they may become productive members of our Tribe and of society.

There is a specific instance at Seminole where a young girl almost quit school to get a job because of financial problems at home. Her father was dead and her mother was unable to work due to a severe debilitating illness.

The JTPA program kept her in school by giving her a job after school. This is just one example of the good this program does.

The severe cuts we have received have done nothing but hurt the Seminole Tribe of Florida. I am sure the same thing can be said of other tribes throughout this great nation.

The Seminole Tribe of Florida is one of 186 groups operating Indian job training programs funded through Title IV of JTPA. These groups include other tribal governments, native Alaskan organizations, Indian groups serving our people in off-reservation areas and one native Hawaiian group.

Over 32,000 people currently participate in our Title IV programs. An additional 12,000 to 13,000 Indian reservation youth get their first job experiences through the JTPA Summer Youth program with funds provided directly to tribes.

Our programs operate in very difficult economic circumstances. The Bureau of Indian Affairs estimates that unemployment affects about 50% of the available labor force in Indian Country. This compares with a national unemployment rate for all Americans of 6.5%.

Despite these circumstances, our programs are doing a good job. Nearly half of the participants find jobs when leaving the programs. About 80% either find jobs or go on to other training or otherwise successfully complete their program activities. Our success rate has climbed steadily over the last several years.

We have not been rewarded for this success. In fact, our programs have been cut time and time again, not only in job training but in education and other areas as well.

Nationally, Indian employment and training resources have been cut close to 70% in real dollars since 1981. For most individual grantees, including the Seminole Tribe of Florida, the losses have been even more severe.

The Administration has proposed still one more cut in its FY 1988 budget. Its proposal would reduce the Indian Title IV program from its current level of $61.5 million to $58.8 million.

Labor Department people say that we can go on serving just as many people as we do now with less money. Mr. Chairman, this just isn't true. I can count the people we can serve at Seminole. Less money means fewer services, for our tribe as well as for Indian grantees around the country.

At a minimum, we would like to ask the Congress to make available at least as much money for our Title IV program as was available for the same activity the year before JTPA started, FY 1983. That year we had $68.9 million to provide employment and training services under the former CETA Title III Indian program. In addition, $14.5 million was available for our Summer Youth programs.

We would like to make one other request concerning the funds which you appropriate for JTPA. The Administration's budget calls for $5.9 million for technical assistance in the program support line item.

We think that a portion of this money should be used to help Indian grantees on terms that are relevant to us. This means a technical assistance program that is developed in direct consultation with Indian grantees -- not a program that is locked away in a national TA contract over which we have no say.

Even the most inexperienced JTPA Directors derive very little knowledge from these national TA contracts because they are not relevant to their particular needs. As anyone who knows Indian people and Indian programs realizes, the differences among tribes are vast and their needs vary greatly from one to the next.

Labor Department officials have refused to engage in an open dialog with us or to adopt our suggestions on TA -- or any other subject -- for the last several years. This situation continues despite the explicit requirement which Congress wrote into the JTPA law for consultation with Indian grantees.

Thank you for giving us the opportunity to present our views. Please consider the needs of our people in your deliberations.

Indian and Native American Employment and Training Coalition

Indian and Native American JTPA Funding Levels

Program	Appropriated FY 83 Summer 83	Appropriated PY 87 Summer 88	DOL Request PY 88 Summer 89
	(Amounts in Millions of Dollars)		
Title IV, Sec. 401 or Equivalent	$68.9	$61.5	$58.8
Summer Youth	14.5	13.6	14.5
Total Funds Shown:	$83.4	$75.1	$73.4

Notes: The FY 83 figures represent funds for the Indian CETA Title III and Summer Youth programs. In addition to the amounts shown, Indian tribes received about $8.4 million in other CETA funds that year for year-round services to youth and in special grants to link training services to private sector employers.

The 1989 Summer Youth figure assumes that Indian tribes receive the usual 1.82% of the Administration's full request for $800 million under the new Youth Initiative.

Individual amounts do not necessarily add to totals due to rounding.

STATEMENT OF JILL MILLER, EXECUTIVE DIRECTOR, DISPLACED HOMEMAKERS NETWORK

Senator INOUYE. Our next witness is the executive director of the Displaced Homemakers Network, Ms. Jill Miller.

Ms. Miller, welcome.

Ms. MILLER. I am Jill Miller, the executive director of the Displaced Homemakers Network, and I am here on behalf of our national board of directors. I want to thank you for the opportunity to speak to you today on critical funding issues which affect millions of women seeking to become economically self-sufficient.

Displaced homemakers are primarily middle-aged and older women who have lost their unpaid jobs as homemakers upon the death, divorce, separation, or disability of their spouse or upon the loss of long-term public assistance. Too young for Social Security and ineligible for unemployment insurance, they fall through the cracks of our society.

Typically, they have families to support, and even more typically they need job training in order to secure employment that will allow them to support themselves and their families.

The Displaced Homemakers Network is the only national organization working at the local, State, regional, and National levels which addresses the specific concerns of displaced homemakers. Acting as an advocate for the millions of displaced homemakers struggling to make the transition into the paid labor force, the network represents close to 1,000 local displaced local homemaker programs nationwide that serve an estimated 250,000 women a year.

For the last 3 years, both the Senate and House Appropriations Committees have directed the U.S. Department of Labor Women's Bureau to fund the Displaced Homemakers Network under the Bureau's model demonstration program. Under those grants, the network has been instrumental in assisting thousands of women in entering and reentering the work force.

The network serves as a clearinghouse for information referrals, training and technical assistance to individual women as well as local programs and State and Federal agencies.

In 1986 the network received thousands of phone calls and letters from women around the country seeking a variety of services and information. We referred those women to local displaced homemaker programs and other appropriate services.

We also provided training and technical assistance materials on a variety of topics to hundreds of service providers at numerous State meetings, regional conferences, and on an individual basis as requested. The topics range from serving women in rural areas to recent changes in pension laws. As a result of a project to increase outreach to minority women, over 23,000 brochures specifically targeted to this population have been disseminated in communities around the country.

The network has also developed projects which assist programs in evaluating their services through efficient data collection systems. We are currently providing local programs with training and technical assistance on how to increase their nongovernmental support through a comprehensive management and resource development system. We are constantly developing new ways to strengthen programs and help individual women.

Funding the Displaced Homemakers Network has been a wise investment of Federal dollars. In partnership with the Women's Bureau, we have made a significant contribution to women entering the work force. However, the number of local programs we are called upon to serve has risen dramatically over the last 3 years from 400 in 1984 to approximately 1,000 today. At the same time, the network's funding to provide services has not increased nor has the Women's Bureau's appropriations for their special projects.

In a time when the number of women entering and reentering the work force continues to rise each year, we ask that Congress consider the importance of the Bureau's projects such as the Displaced Homemaker's Network and increase the Bureau's ability to expand their services as the number of programs and women seeking assistance also continues to grow.

I would also like to address two other issues facing this subcommittee, funding for title IV of JTPA and the Perkins Vocational Education Act.

In the JTPA Amendments of 1986 that Congress passed last year, a new program was established under title IV. Under part D of that title, projects for special populations was created to give special consideration to displaced homemakers with multiple barriers to employment. Thus far, the Department of Labor has not implemented this new program. Persistent attempts to get information from the Department on its time line for implementation and the amount of money allocated to this project have been fruitless.

The Department has received letters from local displaced homemaker programs across the country expressing their concerns about the implementation and allocation of funds for this new program. However, their questions remain unanswered.

Congress has clearly seen the need to increase job training services to women in general and displaced homemakers in particular. We are requesting that this subcommittee ask the Department of Labor about the allocation of funds for displaced homemaker programs under projects for special population and recommend that this important program for displaced homemakers be implemented in a timely fashion.

We hope that you will also consider whether the Employment and Training Administration should support the network in providing technical assistance and training to programs funded under title IV.

Another issue facing this subcommittee is appropriations for vocational education programs. While the network has some concerns about the implementation of vocational education legislation which we will direct to the Senate Labor and Human Resources, over all the vocational education system has proven to be effective in meeting the training needs of displaced homemakers. More specifically, targeting of funds for single parent and homemaker programs has succeeded in permitting women who were formerly excluded from the system to receive vocational skills training.

Funding for the Perkins Vocational Education Act must be increased as provided in the fiscal year 1988 Federal budget in order to maintain Congress' commitment to assisting women in achieving economic self-sufficiency.

PREPARED STATEMENT

Thank you again for allowing the Displaced Homemaker Network to bring our concerns to you. Please call on us for any further information you may need on displaced homemakers or other women's employment and training programs.

[The statement follows:]

STATEMENT OF JILL MILLER

I am Jill Miller, Executive Director of the Displaced Homemakers Network. Thank you for the opportunity to speak to you today on critical funding issues that affect millions of women seeking to become economically self-sufficient.

Displaced homemakers are primarily middle-aged and older women who have lost their unpaid jobs as homemakers upon the death, divorce, separation or disability of their spouse or upon the loss of long-term public assistance. Too young for Social Security and ineligible for unemployment insurance, they fall through the cracks of our society. Typically, they have families to support, and, even more typically, they need job training in order to secure employment that will allow them to support themselves and their families.

The Displaced Homemakers Network is the only national organization working at the local, state, regional, and national levels which addresses the specific concerns of displaced homemakers. Acting as an advocate for the millions of displaced homemakers struggling to make the transition into the paid labor force, the Network represents close to 1,000 local displaced homemaker programs nationwide that serve an estimated 250,000 women a year.

For the last 3 years, both the Senate and House Appropriations Committees have directed the U.S. Department of Labor Women's Bureau to fund the Displaced Homemakers Network under the Departmental Management Women's Bureau Model Demonstration Program. Under those grants, the Network has been instrumental in assisting thousands of women in entering and re-entering the work force.

The Network serves as a clearinghouse for information, referrals, training and technical assistance to individual women as well as local programs and state and federal agencies.

In 1986, the Network received thousands of phone calls and letters from women around the country seeking a variety of services and information. We referred those women to local displaced homemaker programs and other appropriate services. We also provided training and technical assistance materials on a variety of topics to hundreds of service providers at numerous state meetings, ten regional conferences and on an individual basis, as requested. The topics ranged from serving women in rural areas to recent changes in the pension laws. As a result of a project to increase outreach to minority women, over 23,000 brochures specifically targetted to this population have been disseminated in communities around the country.

The Network has also developed projects which assist programs in evaluating their services through an efficient data collection system. We are currently providing local programs with training and technical assistance on how to increase their non-governmental support through a comprehensive management and resource development system. We are constantly developing new ways to strengthen programs and help individual women.

Funding of the Displaced Homemakers Network has been a wise investment of federal dollars. In partnership with the Women's Bureau, we have made a significant contribution to women entering the workforce. However, the number of local programs we are called on to serve has risen dramatically over the last three years--from 400 in 1984 to approximately 1,000 today. At the same time, the Network's funding to provide services has not increased, nor has the Women's Bureau's appropriations for their special projects. In a time when the number of women entering and re-entering the workforce continues to rise each year, we ask that Congress consider the importance of the Bureau's projects, such as the Displaced Homemakers Network, and increase the Bureau's ability to expand their services as the number of programs and women seeking assistance also continues to grow.

I would also like to address two other issues facing this Subcommittee: funding for Title IV of the Job Training Partnership Act (JTPA) and the Perkins Vocational Education Act.

In the JTPA Amendments of 1986, passed by Congress last year, a new program was established under Title IV. Under Part D of that title, "Projects for Special Populations" was created to give special consideration to displaced homemakers with multiple barriers to employment.

Thus far, the Department of Labor has not implemented this new program. Persistent attempts to get information from the Department on its timeline for implementation and the amount of money allocated to this project have been fruitless. The Department has received letters from local displaced homemaker programs across the country expressing their concerns about the implementation and allocation of funds for this new program. However, their questions remain unanswered.

Congress clearly has seen the need to increase job training services to women in general, and displaced homemakers in particular. We are requesting that this Subcommittee ask the Department of Labor about the allocation of funds for displaced homemakers under "Projects for Special Populations" and recommend that this important program for displaced homemakers be implemented in a timely fashion. We hope you will also consider whether the Employment and Training Administration should support the Network in providing technical assistance and training to programs funded under Title IV.

Another issue facing this Subcommittee is appropriations for vocational education programs. The Network has some concerns about implementation of the law which will be directed to the Senate Labor and Human Resources Committee. However, overall the vocational education system has proven to be effective in meeting the training needs of displaced homemakers. More specifically, targetting of funds for the single parent and homemaker program has succeeded in permitting women formerly excluded from the system to receive vocational skills training. Funding for the Perkins Vocational Education Act must be increased as provided for in the FY 1988 federal budget in order to maintain Congress' commitment to assisting women in achieving economic self-sufficiency.

Thank you again for allowing the Displaced Homemakers Network to bring our concerns to you. Please call on us for any further information you may need on displaced homemakers or other women's education and training programs.

Senator Inouye. I thank you very much.

I am certain you are aware that the chairman of this subcommittee, Senator Chiles, has been in the forefront in support of this program, and I am certain he will continue in that path.

He has asked me to assure you that he will be communicating with the Department of Labor to inquire as to why they have not implemented the new program, projects for special populations. The Department may ignore your letters, but I doubt very much if they will ignore Senator Chiles' letters.

Ms. Miller. I should hope not.

Senator Inouye. You can be assured that that letter will be sent soon.

Just for the record, what is the definition of a displaced homemaker? I presume they are all women?

Ms. Miller. They are by and large women. There are a few men, but they are by and large women.

Senator Inouye. Are they all single parents?

Ms. Miller. They may have children, and they may not. They are women who have spent a substantial number of years as homemakers in support of their families and who lose that source of support either through death or divorce.

Senator Inouye. You also described them as middle-aged. What is their average age?

Ms. Miller. Well, we include all adult women in our estimates of the number of women to be served. However, because of the rising increase in labor force participation among young women, it still is predominantly an issue for middle-aged and older women who at the time they were married chose homemaking as their careers when that was what society really expected them to do.

Senator Inouye. How many women in the United States would fit your definition of displaced homemaker?

Ms. Miller. That is a question we are asked all the time, and in an effort to give a good answer we have contracted with the Census Bureau to run some special tapes to try to generate that kind of information.

The preliminary data show that there are approximately 11 million adult women who would fit the definition. Now, about 4 million of those are over 65, so approximately 7 million are between 16 and 64. That would be based on 1980 census data.

Senator Inouye. Sixteen and 64.

Ms. Miller. I am sorry? Approximately 7 million women between the ages of 16 and 64.

Senator Inouye. Well, we are going to follow the leadership of Senator Chiles, and I think you can be assured of good results.

Ms. Miller. Thank you very much.

Senator Inouye. Thank you very much.

STATEMENT OF DR. EUGENE S. MAYER, DIRECTOR, NORTH CAROLINA AREA HEALTH EDUCATION CENTERS PROGRAM

ACCOMPANIED BY:

DR. STEPHEN B. ZUCKER, DIRECTOR, AREA HEALTH EDUCATION CENTERS PROGRAM, SOUTHEASTERN COLLEGE OF OSTEOPATHIC MEDICINE, MIAMI, FL

DR. ARTHUR M. FOURNIER, DIRECTOR, AREA HEALTH EDUCATION CENTERS PROGRAM, UNIVERSITY OF MIAMI SCHOOL OF MEDICINE, MIAMI, FL

Senator INOUYE. Our next witness is the director of the North Carolina AHEC Program, Dr. Eugene Mayer. Dr. Mayer, welcome, sir.

Would you like to identify your associates before proceeding.

Dr. MAYER. I am Dr. Eugene Mayer, associate dean of the School of Medicine of the University of North Carolina, and I direct the North Carolina Area Health Education Centers Program, or AHEC, as it is called.

With me on my left is Dr. Steven Zucker of the Southeastern College of Osteopathic Medicine in Miami, and Dr. Arthur Fournier of the University of Miami School of Medicine. Both gentlemen direct new AHEC projects in Florida.

We are here today on behalf of 27 AHEC projects in 26 States that are receiving Federal AHEC funding through the Health Resources and Services Administration, as shown on the map in your package.

As we have indicated in our previous appearances, Senator, before you and this subcommittee, we appreciate the support that we have received from you in the past. It is essential, we believe, that the national AHEC Program continue, and we urge the Congress to continue to appropriate $18 million for fiscal year 1988.

Throughout the United States, we continue to attack the problem that led to the establishment of the program, that being the maldistributions of physicians and other practitioners in rural and inner city areas. And I am happy to report that we are making important progress around the country.

In North Carolina, for example, during the decade before our AHEC Program, only 41 percent of our counties experienced an improving ratio of physicians to population. Now, since the program and many other efforts in our State, 89 percent of our counties find their ratios improving, and we are the fourth most rural State.

Many other States with AHEC programs, including California, New Mexico, North Dakota, South Carolina, and West Virginia, are reporting some more successes. New AHEC programs have been created in Florida, Arkansas, Alaska, Idaho, and other States.

Many rural and inner city areas still do not have enough physicians and other health professionals. Particularly distressing is that the problem persists at a time when we are hearing about a potential oversupply of physicians. The simple truth is that young physicians do not tend to set up practice in rural and inner city areas unless they receive a lot of special attention.

AHEC is one of the programs that provides that kind of attention. The AHEC Program has evolved into an effective partnership involving Federal, State, and local governments. The partnership involves other primary care initiatives of the Federal Government and the private sector as well.

For example, in North Carolina over 30 percent of our private physicians regularly teach students and residents through this program, and this statistic represents an important increase since we last appeared before you in the subcommittee.

The AHEC Program has enabled medical students and residents to take a portion of their clinical training at community hospitals and health centers, an arrangement that ends up benefiting everyone. In Florida, this means neighborhood health centers in inner city Miami, as well as numerous migrant and rural health centers in isolated areas around Lake Okeechobee.

Students and residents receive an exposure to practicing physicians. The local agencies and the physicians get the services of highly qualified health personnel, and the people of the community have access to better health care.

We are especially pleased with the personal involvement and support of Senator Chiles and his staff for the program in Florida. The hope is that some of the young health professionals who participate in this community-based training program will decide to practice in rural and inner city areas.

In North Carolina as an example, 79 percent of the family practice residents trained in association with the AHEC Program have remained in North Carolina to practice and 50 percent of these have located in towns of fewer than 5,000 people.

I am happy to report also that AHEC's have been successful in adapting to meet changing needs. Major efforts have been undertaken to develop training programs in the areas of aging, health promotion, disease prevention, AIDS, management, cost containment, and mental health.

Mr. Chairman, the national AHEC Program has proven to have been a wise investment for the Federal Government. Federal spending has spurred State and local governments into spending hundreds of millions of dollars for AHEC programs. This year, for example, the State of North Carolina has appropriated $27 million for AHEC activities.

The national AHEC Program demonstrates our Government working at its best. We invite the subcommittee to review the strong endorsements of the Area Health Education Centers Program contained in several national studies.

We hope that in the fiscal year 1988 budget the Congress will maintain its commitment to a program aimed at ending the maldistribution of physicians and health practitioners in rural and inner city areas. The United States, we believe, cannot afford to be without this program.

PREPARED STATEMENT

Thank you again, Mr. Chairman, for the opportunity to appear here today. In particular, we appreciate the personal support that you have given us in the past and that of the subcommittee, and we hope that we can continue to justify this in the future.

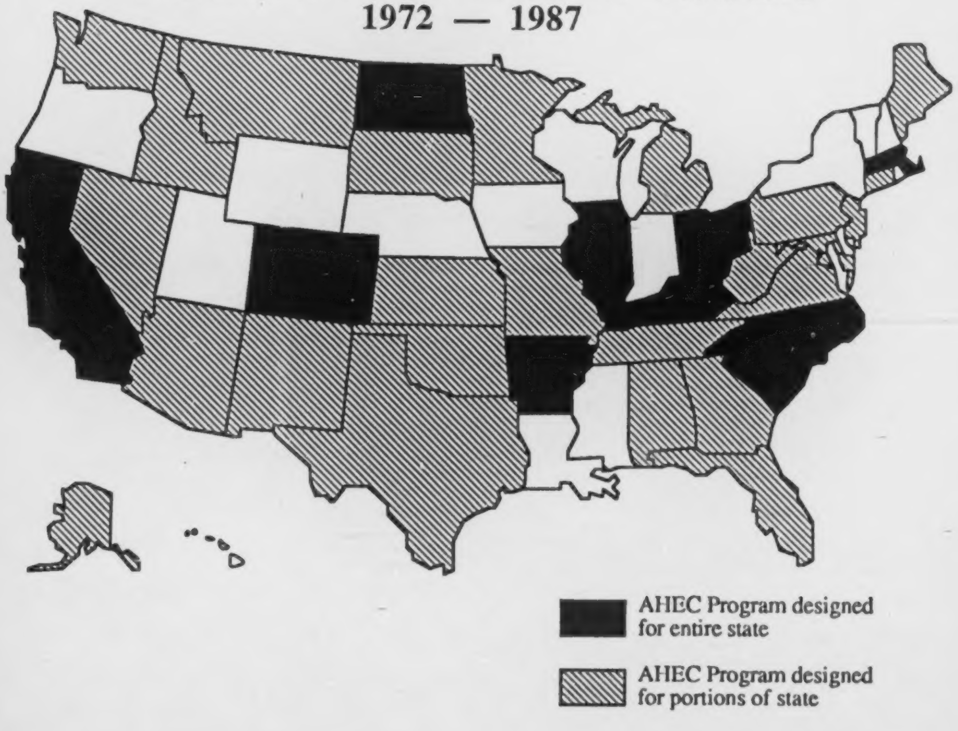
[The statement follows:]

STATEMENT OF EUGENE S. MAYER

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, I AM DR. EUGENE MAYER, AND I AM ASSOCIATE DEAN OF THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL AND DIRECTOR OF THE NORTH CAROLINA AREA HEALTH EDUCATION CENTERS PROGRAM, OR AHEC, AS WE CALL IT. WITH ME ARE DR. STEPHEN B. ZUCKER OF THE SOUTHEASTERN COLLEGE OF OSTEOPATHIC MEDICINE IN MIAMI AND DR. ARTHUR M. FOURNIER OF THE UNIVERSITY OF MIAMI SCHOOL OF MEDICINE. BOTH SCHOOLS HAVE NEW AHEC PROJECTS.

WE ARE HERE TODAY ON BEHALF OF 27 AHEC PROJECTS IN 26 STATES THAT ARE RECEIVING FEDERAL AHEC FUNDING THROUGH THE HEALTH RESOURCES AND SERVICES ADMINISTRATION. (SEE MAP). AND I AM HERE ON BEHALF OF THE MILLIONS OF AMERICANS WHO HAVE BENEFITTED OR STAND TO BENEFIT FROM THIS IMPORTANT NATIONAL PROGRAM FOR IMPROVING HEALTH CARE.

STATES THAT HAVE HAD AHEC ACTIVITIES THROUGH FEDERAL AHEC FUNDING 1972 — 1987


■ AHEC Program designed for entire state
▨ AHEC Program designed for portions of state

AS WE HAVE INDICATED IN PREVIOUS APPEARANCES BEFORE THE SUBCOMMITTEE, WE APPRECIATE THE SUPPORT THAT WE HAVE RECEIVED THROUGH THE YEARS FROM YOU AND FROM THIS SUBCOMMITTEE. WE BELIEVE IT IS ESSENTIAL THAT THE NATIONAL AHEC PROGRAM CONTINUE. WE URGE THE CONGRESS TO CONTINUE TO APPROPRIATE $18 MILLION FOR FISCAL YEAR 1987 FOR THIS PROGRAM, WHICH IS CURRENTLY AUTHORIZED UNDER TITLE VII, SECTION 781 OF THE PUBLIC HEALTH SERVICE ACT.

THROUGHOUT THE UNITED STATES WE CONTINUE TO ATTACK THE PROBLEM THAT LED TO THE ESTABLISHMENT OF THE NATIONAL AHEC PROGRAM--THAT PROBLEM BEING THE MALDISTRIBUTION OF PHYSICIANS AND OTHER HEALTH PRACTITIONERS IN RURAL AND INNER CITY AREAS. I AM HAPPY TO REPORT, MR. CHAIRMAN, THAT WE IN AHEC ARE MAKING IMPORTANT PROGRESS AROUND THE COUNTRY.

IN MY HOME STATE OF NORTH CAROLINA, FOR EXAMPLE, DURING THE DECADE BEFORE OUR AHEC PROGRAM WAS ESTABLISHED, ONLY 41 PERCENT OF OUR COUNTIES HAD EXPERIENCED AN IMPROVING RATIO OF PHYSICIANS TO POPULATION. BUT DURING THE FOLLOWING DECADE, 89 PERCENT OF OUR COUNTIES FOUND THEIR PHYSICIAN-TO-POPULATION RATIOS IMPROVING.

MANY OTHER STATES WITH AHEC PROGRAMS--INCLUDING CALIFORNIA, NEW MEXICO, NORTH DAKOTA, SOUTH CAROLINA AND WEST VIRGINIA--ARE REPORTING SIMILAR SUCCESSES IN BROADENING THE GEOGRAPHIC DISTRIBUTION OF HEALTH PROFESSIONALS. NEW AHEC PROGRAMS HAVE BEEN CREATED IN FLORIDA, ARKANSAS, ALASKA, IDAHO, AND OTHER STATES. THESE PROGRAMS SHOULD EVENTUALLY BE SUCCESSFUL IN HELPING TO IMPROVE THE DISTRIBUTION OF MEDICAL MANPOWER.

ALTHOUGH MANY AMERICANS NOW ENJOY A STANDARD OF HEALTH CARE THAT WOULD HAVE SEEMED UNIMAGINABLE TWO DECADES AGO, MUCH REMAINS TO BE DONE. MANY RURAL AND INNER CITY AREAS AROUND THE UNITED STATES STILL DO NOT HAVE ENOUGH PHYSICIANS, NURSES AND OTHER

HEALTH PROFESSIONALS. PARTICULARLY DISTRESSING IS THE FACT THAT THIS PROBLEM PERSISTS AT A TIME WHEN WE ARE HEARING A LOT OF TALK ABOUT A POTENTIAL OVERSUPPLY OF PHYSICIANS IN GENERAL. THE SIMPLE TRUTH IS THAT YOUNG PHYSICIANS DO NOT TEND TO SET UP PRACTICE IN RURAL OR INNER CITY AREAS UNLESS THEY RECEIVE A LOT OF SPECIAL ATTENTION. **AHEC PROVIDES THAT ATTENTION.**

THE MALDISTRIBUTION OF HEALTH PROFESSIONALS IN RURAL AND INNER CITY AREAS IS A TERRIBLY DIFFICULT PROBLEM, MR. CHAIRMAN. THAT WAS SOMETHING THAT WE IN THE MEDICAL COMMUNITY RECOGNIZED AT THE TIME THAT THE AHEC CONCEPT WAS BEING DEVELOPED 15 YEARS AGO. THE CONGRESS RECOGNIZED IT, TOO, AND PASSED LEGISLATION THAT PROVIDED FEDERAL FUNDS FOR THE NATIONAL AHEC PROGRAM. EVERYONE INVOLVED KNEW WE WERE TALKING ABOUT A TREMENDOUS EFFORT THAT WOULD NEED TO BE MEASURED IN TERMS OF DECADES, NOT YEARS.

THE AHEC PROGRAM HAS EVOLVED INTO AN EFFECTIVE PARTNERSHIP INVOLVING THE FEDERAL GOVERNMENT, STATE GOVERNMENTS, LOCAL GOVERNMENTS, HEALTH SCIENCE SCHOOLS, COMMUNITY HOSPITALS AND HEALTH PRACTITIONERS. THE PARTNERSHIP INVOLVES THE OTHER PRIMARY CARE INITIATIVES OF THE FEDERAL GOVERNMENT, AS WELL. THAT KIND OF COOPERATION SEEMS TO HAPPEN ALL TOO RARELY IN OUR SOCIETY, AND WE WHO ARE ASSOCIATED WITH AHEC FEEL MOST FORTUNATE. WE HAVE ALL TYPES OF PEOPLE FROM THE PUBLIC AND PRIVATE SECTORS WORKING TOGETHER IN PURSUIT OF A COMMON PUBLIC POLICY OBJECTIVE. FOR EXAMPLE, IN NORTH CAROLINA, OVER 30 PERCENT OF OUR STATE'S PRIVATE PHYSICIANS REGULARLY TEACH THROUGH THIS PROGRAM.

THE AHEC PROGRAMS ENABLE STUDENTS AND MEDICAL RESIDENTS AT HEALTH SCIENCE SCHOOLS TO TAKE A PORTION OF THEIR CLINICAL TRAINING AT COMMUNITY HOSPITALS AND HEALTH CENTERS--AN ARRANGEMENT THAT ENDS UP BENEFITTING EVERYONE. IN FLORIDA, FOR EXAMPLE, THIS MEANS NEIGHBORHOOD HEALTH CENTERS IN INNER CITY MIAMI AS WELL AS NUMEROUS MIGRANT AND RURAL HEALTH CENTERS IN ISOLATED AREAS

AROUND LAKE OKEECHOBEE. THE STUDENTS AND THE RESIDENTS RECEIVE AN EXPOSURE TO PRACTICING PHYSICIANS IN A COMMUNITY SETTING--SOMETHING THEY MIGHT NOT HAVE HAD OTHERWISE. THE LOCAL AGENCIES GET THE SERVICES OF HIGHLY QUALIFIED HEALTH PERSONNEL AND THE PEOPLE OF THE COMMUNITY HAVE ACCESS TO BETTER HEALTH CARE.

THE HOPE, OF COURSE, IS THAT SOME OF THE YOUNG HEALTH PROFESSIONALS WHO PARTICIPATE IN THIS COMMUNITY-BASED PROGRAM WILL DECIDE AFTER COMPLETING THEIR EDUCATION TO PRACTICE IN RURAL OR INNER CITY AREAS--THE AREAS WHERE HELP IS DESPERATELY NEEDED. **IN NORTH CAROLINA, 79 PERCENT OF THE FAMILY PRACTICE RESIDENTS TRAINED IN AHEC HAVE REMAINED IN THE STATE, AND 50 PERCENT OF THOSE HAVE LOCATED IN TOWNS OF FEWER THAN 5,000 PERSONS.**

THE AHEC PROGRAMS ALSO WORK WITH HEALTH SCIENCE SCHOOLS TO OFFER CONTINUING EDUCATION AND TECHNICAL ASSISTANCE TO PRACTICING HEALTH PROFESSIONALS THROUGHOUT A STATE. THIS SERVICE NOT ONLY HELPS COMMUNITY-BASED PROFESSIONALS FEEL LESS ISOLATED BUT ALSO ASSURES THEM THAT THEY CAN KEEP UP TO DATE EVEN IF THEY PRACTICE FAR FROM THE MAJOR MEDICAL CENTERS.

I AM HAPPY TO REPORT ALSO THAT AHEC'S AROUND THE NATION HAVE BEEN SUCCESSFUL IN ADAPTING PROGRAMMING TO MEET CHANGING COMMUNITY NEEDS. MAJOR EFFORTS HAVE BEEN UNDERTAKEN TO DEVELOP INTERDISCIPLINARY EDUCATIONAL PROGRAMS IN COMMUNITY SETTINGS IN THE AREAS OF AGING, HEALTH PROMOTION AND DISEASE PREVENTION, AIDS, HEALTH SERVICES MANAGEMENT, COST CONTAINMENT, AND MENTAL HEALTH.

MR. CHAIRMAN, THE NATIONAL AHEC PROGRAM HAS PROVEN TO HAVE BEEN A WISE INVESTMENT FOR THE FEDERAL GOVERNMENT. SINCE 1972, FEDERAL FUNDING FOR AHEC'S NATIONWIDE HAS TOTALED ABOUT THE SAME AMOUNT THAT THE U.S. OBLIGATES FOR THE HEALTH CARE FINANCING ADMINISTRATION EVERY TWO TO THREE DAYS. THAT MODEST AMOUNT OF FEDERAL SPENDING HAS LED TO THE ESTABLISHMENT OF AHEC'S FOR 32

STATES, 26 OF WHICH ARE STILL RECEIVING FEDERAL FUNDS, AND IT HAS SPURRED STATE AND LOCAL GOVERNMENTS INTO SPENDING HUNDREDS OF MILLIONS OF DOLLARS FOR AHEC PROGRAMS IN RESPONSE TO THE FEDERAL CATALYST. THIS YEAR, FOR EXAMPLE, THE STATE OF NORTH CAROLINA HAS APPROPRIATED $27 MILLION FOR AHEC ACTIVITIES.

THE NATIONAL AHEC PROGRAM DEMONSTRATES OUR GOVERNMENT WORKING AT ITS BEST. WE INVITE THE SUBCOMMITTEE TO REVIEW THE STRONG ENDORSEMENTS OF THE AHEC PROGRAM CONTAINED IN THE FOLLOWING STUDIES:

1. THE 1978 REPORT OF THE GENERAL ACCOUNTING OFFICE;
2. THE 1978 REPORT OF THE SURVEY AND INVESTIGATIONS STAFF OF THE HOUSE APPROPRIATIONS COMMITTEE;
3. THE 1976 AND 1979 REPORTS OF THE CARNEGIE COUNCIL;
4. THE 1980 REPORT TO THE CONGRESS BY THE SECRETARY OF HEALTH, EDUCATION AND WELFARE; AND
5. THE 1980 REPORT OF THE GRADUATE MEDICAL EDUCATION NATIONAL ADVISORY COMMITTEE, CALLED THE GMENAC REPORT.

WE AT AHEC HOPE THAT IN THE FISCAL YEAR 1988 BUDGET THE CONGRESS WILL MAINTAIN ITS COMMITMENT TO A PROGRAM AIMED AT ENDING THE MALDISTRIBUTION OF PHYSICIANS AND HEALTH PRACTITIONERS IN RURAL AND INNER CITY AREAS. THIS COMMITMENT ALLOWS FOR FUNDING OF STATEWIDE AHEC'S, REGIONAL AHEC'S, AND AHEC SPECIAL INITIATIVES. THE UNITED STATES, MR. CHAIRMAN, CANNOT AFFORD TO BE WITHOUT THIS PROGRAM.

THANK YOU AGAIN FOR THE OPPORTUNITY TO APPEAR HERE TODAY. WE IN THE AHEC PROGRAM LOOK FORWARD TO CONTINUING TO WORK WITH THE CONGRESS IN THE INTEREST OF ENSURING ACCESS TO PROPER HEALTH CARE FOR ALL AMERICANS.

Senator INOUYE. Thank you very much, sir.

As you know, the administration has zero funded this program. And I have been authorized by the chairman, Senator Chiles, to advise you that he will be recommending a full funding of $18 million. And when the chairman recommends, we follow.

Dr. MAYER. We are truly appreciative.

Senator INOUYE. Just a parochial question. I notice on your map that Hawaii is not included. How come?

Dr. MAYER. To my knowledge, Hawaii has not applied for this program, but I do not know if that is a fact. It might be worth checking with the dean of the school of medicine, who was here earlier.

But I do not believe that Hawaii has applied.

Senator INOUYE. I see. I just wanted to check.

Dr. MAYER. We would like to have Hawaii in the program, sir.

Senator INOUYE. I thank you very much.

STATEMENT OF FRANK W. MYERS, D.O., AMERICAN ASSOCIATION OF COLLEGES OF OSTEOPATHIC MEDICINE

Senator INOUYE. Our next witness represents the American Association of Colleges of Osteopathic Medicine, Dr. Frank Myers. Welcome, sir.

You have been sitting here all morning.

Dr. MYERS. Mr. Chairman, my name is Frank W. Myers, D.O. I am dean of the College of Osteopathic Medicine at Ohio University and chairman of the board of governors of the American Association of Colleges of Osteopathic Medicine, the AACOM.

I am pleased to be here today to present the views of AACOM on fiscal year 1988 funding for programs that support the education of health professionals. At the outset let me thank the members of this committee for their past efforts in support of these programs.

Osteopathic medicine is committed to providing primary medical care to smaller communities throughout the country. My statement submitted for the record lists many examples of activities that relate to this mission. However, in the time I have today I would like to focus on some of the work at my own college.

The Osteopathic Medical School at Athens, OH, was established in 1975 by the general assembly specifically for the training of primary care osteopathic physicians to practice in the medically underserved areas of the State. We have been successful in meeting that mandate, and much of our success is a direct result of the funds we have received from the Federal Government.

For example, the college is a partner in an area health education center grant. This multidisciplinary program allows us to provide medical care to rural underserved areas of southeastern Ohio and to give students experience in family medicine settings, encouraging their choice of practice in this field.

Our work in rural Ohio is further strengthened by Federal funding that supports our family medicine training programs.

Despite the success of these programs, the President's budget again proposes substantial reductions in their funding. If Congress accepts these cuts, Ohio would be hard-pressed to continue these kinds of programs.

We urge that funding for the title 7 health professionals grant programs be maintained. Many of our students must have financial assistance, and I want to express particular concern about the President's recommendation to reduce HEAL support to $100 million in fiscal year 1988. This cut would be devastating to our students.

Approximately 50 percent of our students' loan funds now come out of the HEAL Program. We believe that osteopathic medical education should be available to all who are qualified to become good osteopathic physicians, so we urge a continuing Federal commitment to help students meet their educational costs.

In conclusion, Mr. Chairman, let me reiterate that our main goal is to train physicians to provide comprehensive family health services in areas of the country where the need is greatest.

We ask this subcommittee to help us continue this work by ensuring that programs under title 7 of the Public Health Service Act and programs of Federal assistance to students are adequately funded in fiscal year 1988.

PREPARED STATEMENT

Thank you, Mr. Chairman. I would be pleased to answer any questions.

[The statement follows:]

STATEMENT OF FRANK W. MYERS

My name is Frank W. Myers, D.O. I am Dean of the College of Osteopathic Medicine at Ohio University, and Chairman of the Board of Governors of the American Association of Colleges of Osteopathic Medicine (AACOM). I am pleased to be here today to present the views of AACOM on fiscal year 1988 funding for programs that support health professions education. These include programs of student assistance and also grants to health professions schools under Title VII of the Public Health Service Act. Let me acknowledge at the outset the work this Committee has done to preserve funds for these programs. All of us at AACOM appreciate your efforts.

Mr. Chairman, over the years osteopathic medicine has been committed to providing primary medical care, especially to those who live in smaller communities. Approximately 80 percent of America's osteopathic physicians practice in primary care. About half of the osteopathic physicians are practicing today in communities of under 50,000. My own school in Athens, Ohio, was established in 1975 by the General Assembly specifically for the training of primary care osteopathic physicians to practice in the medically underserved areas of the state.

Since our college opened, 68 percent of our graduates have gone into practice in Ohio, 45 percent in communities with less than 50,000 population. Three-fourths of our graduates have gone into primary care.

I would note, Mr. Chairman, that much of our success results from the receipt of federal grants over the years which have enabled us to build and expand our innovative training programs and which have also enabled our students, who come from a variety of socioeconomic backgrounds, to have the opportunity to study osteopathic medicine. This is true at all our colleges.

For example, federal family practice grants under Title VII of the Public Health Service Act assist the Chicago College of Osteopathic Medicine support faculty and staff to work with students and patients in their extensive ambulatory clinics. In Des Moines, Iowa, the University of Osteopathic Medicine and Health Sciences has a major program offering free medical care to unemployed people living in the area. Here again, a family practice grant under Title VII helps support the staff in these clinics.

At my college, we are a partner in an area health education center grant. This multi-disciplinary program allows us to provide medical care to rural underserved areas of southeastern Ohio, thus helping to fulfill our legislative mandate. Other colleges of osteopathic medicine have likewise used the AHEC program to reach throughout their states to provide medical services. For example, the College of Osteopathic Medicine of the Pacific in California uses an AHEC grant to reach the Hispanic community in east Los Angeles in an effort to improve medical services there. They work cooperatively with California State University--Los Angeles. Southeastern College of Osteopathic Medicine in Florida uses an AHEC grant to provide medical services to migrant families in that state.

Mr. Chairman, I cite these examples in order to demonstrate as clearly as I can the connection between the funds you appropriate in Washington and the training and services we can provide at our colleges throughout the nation. There is no question that these health professions grants have been invaluable to enlarging the ability of osteopathic medical colleges to train students and to provide medical service.

Given this success, it is indeed unfortunate that once again the President's budget proposes substantial reductions in funding for health professions grants and rescission of funds already appropriated by Congress. Were Congress to accept these cuts as proposed in the fiscal year 1988 budget, our colleges would be hard pressed to maintain these kinds of programs.

Mr. Chairman, we at AACOM are proud of the work our colleges do, and we believe they have made good use of these grants in pursuit of important national health goals. However, we are also mindful that you and Congress face many competing financial demands. Therefore, we would ask only that funds be increased so that current services and activities can continue.

Mr. Chairman, the raw material of an educational institution is faculty and students. The grant programs I have just discussed are used to strengthen faculty and curriculum in order that our colleges may perform their teaching and service tasks more effectively. However, without the right mix of students, we would not succeed in our educational mission.

As I mentioned earlier, our college in Ohio has a special dedication to providing family physicians in our region. Therefore, we seek students with an interest in providing medical care in rural communities. Often these students are from these rural areas themselves and many do not have the personal or family resources to pay the costs of an osteopathic medical education. They must rely on financial assistance, much of it federal. The availability of the variety of federal student assistance programs has made it possible for our colleges to offer an education to a broad spectrum of students. These educational opportunities will evaporate without a continued federal commitment.

Let me give you some statistics that dramatize the dependence of our students on federal education assistance. Tuition and living expenses at a private osteopathic medical college can exceed $21,000 a year. At state schools the average costs are not as high but still are about $10,000 for residents and over $12,000 for non-residents. Faced with these kinds of costs, 96 percent of the seniors in osteopathic medical colleges expect to graduate with sizeable debts from financing their education. In 1984 that debt averaged $40,000. For those students who will graduate in 1988, we anticipate that their indebtedness will average $61,000.

I must express particular concern about the President's recommendation to reduce HEAL support to $100 million in fiscal year 1988. This is nearly a two-thirds cut in current levels and would be devastating to our students. Approximately 50 percent of our students' loan funds come out of the HEAL program.

Mr. Chairman, we believe that our colleges should be open to all qualified students. We believe that we are succeeding in meeting that goal. Minority applications and admissions continue to rise. Women now exceed 25 percent of total enrollment. We want to continue this progress. However, nearly 20 percent of senior students report parental incomes of less than $10,000, and 50 percent of our graduates come from families with income below $30,000. Additional family support is simply not available to these students. Federal assistance is essential if we are to continue to educate students from diverse economic backgrounds.

In conclusion, Mr. Chairman, let me reiterate that the main goal at the colleges of osteopathic medicine is to train physicians to provide comprehensive family health services to those in need, and to provide those services in geographic areas of the country where the need is greatest. The Federal Government has been an important part of that effort.

We ask the Subcommittee to help us continue this work by ensuring that grant programs under Title VII of the Public Health Service Act and programs of federal assistance to students are adequately funded in fiscal year 1988.

Thank you, Mr. Chairman. I would be pleased to answer any questions from the Members of the Subcommittee.

Senator INOUYE. Thank you very much, doctor.

I have been authorized to advise you, sir, that the chairman of this committee will be recommending to the full committee that we restore the cuts suggested by the administration. So with your help and with the help of our colleagues, we should have a full restoration.

Dr. MYERS. Thank you very much.

Senator INOUYE. As a matter of curiosity, I am aware that osteopathic medicine is like the M.D. degree. Why do you have your degree and an M.D. degree? Is it not the same thing?

Dr. MYERS. It is not the same thing.

Senator INOUYE. It is not the same thing.

Dr. MYERS. There are a great many similarities, but there are also differences, which are sometimes subtle, sometimes rather abrupt. And all of the differences are quite complex.

We have been in existence as a separate profession since the 1890's. We have been quite small. We began as a rural medical profession in northeastern Missouri in the late part of the 19th century, and have been a distinct minority when compared to the more numerous M.D.'s.

Over the last 15 years, the number of osteopathic colleges has risen from five to our present situation, which is now 15 colleges of osteopathic medicine in the United States.

The five that I spoke of earlier were all privately funded free-standing medical schools. Now we have a good many State-funded schools, a number of which are part of the State universities, such as Ohio University where my own college began in 1975.

Senator INOUYE. Is it not true that the osteopathic physician is qualified and authorized to do everything that an M.D. can do?

Dr. MYERS. We have unlimited license privileges in all 50 States and the District of Columbia. Our officers serve along with M.D.'s in the medical corps and receive appropriate rank with their commissions. We have representatives in all specialties of practice, in all surgical specialties, all of the diagnostic and medical specialties.

But 80 percent of the osteopathic physicians in this country are in primary care, and a large percentage of those are in family medicine. I believe that this is a direct outgrowth of the fact that we place great emphasis on the significance of the muskuloskeletal system in the training of our physicians.

Our physicians are given a comprehensive background in their predoctoral work, but they are trained to be well-rounded physicians all the way through their educational programs. Those who do decide to then focus later on a particular narrow specialty of course go through the multiyear residency programs that are expected for this kind of training.

But we have a great interest in family practice and general practice in the osteopathic profession, and a great interest in smaller and underserved communities.

Senator INOUYE. Thank you very much, sir.

Dr. MYERS. Thank you.

STATEMENT OF CHARLES R. MODICA, ST. GEORGES UNIVERSITY SCHOOL OF MEDICINE

Senator INOUYE. Our next witness represents St. Georges University School of Medicine, Mr. Charles Modica. Welcome, sir.

Mr. MODICA. Thank you. Mr. Chairman and members of the subcommittee.

I am here to advise you today of two significant developments that are central to the continued progress of our school as a recognized producer of quality medical graduates and to relate that to some of the earlier testimony today.

First, the New York State Department of Education has reached a decision that approves the placement of third and fourth year students from St. Georges to begin clinical clerkships at several of New York's teaching hospitals. About 60 of our third and fourth year medical students are engaged in such clerkships at this time.

The approval by New York, along with a similar 1985 decision by New Jersey, clearly demonstrates the confidence placed in St. Georges by independent State education departments after onsite reviews of our campuses. The approval of New York makes St. Georges the only foreign medical school offering medical education in English that has approved clinical campuses in the United States in both New York and New Jersey.

Second, Mr. Chairman, is that during last year's rewrite of the Higher Education Act authorization Congress recognized the significant contribution that St. Georges University makes in the education of a significant number of U.S. citizens who return to the United States after their medical education to become outstanding practitioners of medicine.

The Higher Education Act now contains specific criteria that would eliminate most guaranteed student loan [GSL] opportunities for U.S. students attending foreign medical schools. But during consideration Congress included provisions continuing GSL eligibility for U.S. students that attend schools that have a pass rate of 45 percent or better on the examination administered by the Educational Commission for Foreign Medical Graduates.

Under this criteria, St. Georges is the only Caribbean institution and one of the few in the world that qualifies because of its high pass rate on that examination.

I mention these two developments for several reasons, but primarily to demonstrate that St. Georges is being recognized and singled out as an institution that provides a level of quality education that is not found at many other foreign medical schools, and that the approval of the States, after onsite visits to the campuses, to utilize and train graduates of St. Georges suggests that we are filling a manpower need not currently being filled by available domestically trained medical graduates.

In fact, since St. Georges was founded in 1976 nearly 1,100 students have graduated with degrees in medicine, and many of these people have returned to the United States to practice in underserved areas, often in inner city teaching hospitals that treat great numbers of low income and indigent patient populations.

Some 80 to 90 percent of residency positions are filled by graduates of foreign medical schools at such hospitals. There would be a significant problem in handling the patient load in many of these hospitals if not for these slots being filled by eager graduates of non-U.S. schools, such as St. Georges.

The journal of the American Medical Association in its January 18, 1985, issue reported that St. Georges University School of Medicine had the highest initial pass rate of all leading foreign medical schools in the world on the U.S. qualifying examination, the ECFMG.

As each class at St. Georges finishes its second year of medical education, approximately one-third of that class transfers to U.S. medical schools to complete their education.

Mr. Chairman, the President's budget request for student financial assistance, particularly guaranteed student loans, is unrealistic. The demand and genuine need for student aid continues to be significant.

At times this may seem frustrating to some, but to me it is an indication that the young people of our Nation want to be educated. Frankly, I cannot think of a more positive situation.

We encourage your subcommittee to make your best effort, given the fiscal constraints, to devoting as great a level as possible to student aid for the fiscal year 1988. While neither our students nor our institution receive a great deal of the health professions resources allocated by your panel, I would encourage continued support of this significant Federal resource for targeting special health care delivery needs and health professions training needs.

There is still a documented shortage of many certain health care practitioners, and certainly hundreds of underserved areas in the Nation. I want to point out that 25 percent of all the physicians licensed in this country today are foreign graduates.

And you had testimony earlier from the AHEC group requesting an $18 million funding for the next year. One of the areas they focus on is the maldistribution of physicians in these areas. And I think foreign medical graduates have continued to help solve those problems outside of massive Federal Government spending programs.

In addition, you had some witnesses this morning present some very well thought out campaigns for diabetes research and cardiac research funding. And I would like to also add that foreign medical graduates have added to the pool of physicians in this country that is engaged in the research.

PREPARED STATEMENT

And as long as we have a shortage of physicians and we do not approach the so-called doctor glut, you will continue to have Ph.D.'s and other people who do not have the full spectrum of medical knowledge involved in this research. So the more physicians we have, the more that all of these programs will benefit.

Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF CHARLES R. MODICA

Mr. Chairman and Members of the Subcommittee, I am here to advise you today of two significant developments that are central to the continued progress of our school as a recognized producer of quality medical graduates.

First, the New York State Department of Education has reached a decision that approves the placement of third and fourth year students from St. George's to begin clinical clerkships at several of New York's teaching hospitals. About 60 of our third and fourth year medical students are engaged in two-year clerkships at Brooklyn Hospital, Methodist Hospital, and Coney Island Hospital, in Brooklyn.

The approval by New York, along with a similar 1985 decision by New Jersey, clearly demonstrates the confidence placed in St George's by independent State Education Departments after on-sight reviews of our campuses. The approval by New York makes St. George's the only foreign school offering medical education in English that has an approved campus in New York State.

Second, Mr. Chairman, is that during last year's rewrite of the Higher Education Act Authorization, Congress recognized the significant contribution that St. George's University School of Medicine makes in the education of a significant number of U.S. citizens who return to the United States after their medical education to become outstanding practitioners of medicine. The Higher Education Act now contains specific criteria that would eliminate most Guaranteed Student Loan opportunities for U.S. students attending foreign schools. But, during consideration, Congress included provisions continuing GSL eligibility for U.S. students who attend schools that have a pass rate of 45% or better on the examination administered by the Educational Commission for Foreign Medical Graduates (ECFMG). Under this criteria, St. George's is the only Carribean institution that qualifies, because of its comparatively high pass rate.

I mention these two developments for several reasons, but primarily to demonstrate that St. George's is being recognized and singled out as an institution that provides a level of quality education that is not found at many other foreign medical schools. And, that the approval of these states to utilize and train graduates of St. George's suggests they are filling a manpower need not currently being filled by available domestically trained medical graduates.

Since St. George's was founded in August of 1976, nearly 800 students have graduated with degrees in medicine, many of whom return to the United States to practice in underserved areas. Often in inner-city area teaching hospitals that treat great numbers of low-income and indigent patient populations, 80-90% of residency positions are filled by graduates of foreign medical schools. There would be a significant problem in handling the patient load in many of these hospitals if not for these slots being filled by eager graduates from non-U.S. schools such as St. George's.

The Journal of the American Medical Association, in its January 18, 1985 issue, reported St. George's University School of Medicine had the highest initial pass rate of all the leading foreign medical schools in the world on the U.S. Qualifying Examination (the ECFMG). As each class at St. George's finishes it second year of medical education, approximately one-third of that class transfers to U.S. medical schools to complete their education.

Mr. Chairman, the President's budget request for student financial assistance, particularly Guaranteed Student Loans, is unrealistic. The demand, and genuine need for student aid continues to be significant. At times, this may seem frustrating to some, but to me it is an indication that the young people of our nation want to be educated. Frankly, I can not think of a more positive situation. We encourage your Subcommittee to make your best effort, given fiscal constraints, to devoting as great a level as possible to student aid in fiscal year 1988.

While neither our students or our institution receive a great deal of health professions resources allocated by your panel, I would encourage continued support of this significant federal resource for targeting special health care delivery needs and health professions training needs. There is still a documented shortage of many certain health care practitioners, and certainly hundreds of underserved areas in the nation.

I appreciate the opportunity to appear today before your subcommittee. I am pleased to respond to any questions you have.

Senator INOUYE. Thank you very much, sir.

I have been authorized by the chairman of this committee, Senator Chiles, that he will be recommending to the full committee the full restoration of the cuts suggested by the administration. So we should be going back to the figure that appeared in the present fiscal year.

What percentage of your students are American citizens?

Mr. MODICA. About 85 percent of our students are American citizens.

Senator INOUYE. And do they all go back to the United States to practice?

Mr. MODICA. Just about all of them. We've been fortunate in having a few stay in the Caribbean area to help serve down there, in addition to the local scholarship students that we have. They have made a little bit of an impact in Grenada and in St. Vincent.

But just about all of them do return to the United States. About double the percentage of our students, however, choose rural and underserved areas than the national average of American medical graduates, and that is not uncommon for foreign trained graduates.

Senator INOUYE. What is your pass rate?

Mr. MODICA. On the ECFMG, our pass rate is over 80 percent, which ranks us No. 1 in the world as far as the initial pass rate on that examination.

Senator INOUYE. I thank you very much. I think you will be pleased with what we do to your program, sir.

Mr. MODICA. Thank you, Mr. Chairman.

Senator INOUYE. Thank you.

I would like to recognize my very distinguished colleague from North Dakota, Senator Quentin Burdick. He has a very special person he would like to introduce to the committee.

Senator BURDICK. I wonder if Dr. Marvin O. Kolb would approach the table.

Mr. Chairman, I would like to point out that Dr. Kolb has a new system in advocating children's health, especially related to preventative health care and child care immunization. Dr. Kolb has a long-standing expertise in these areas and it makes him an excellent source for this committee.

You are welcome to the committee, doctor.

Senator INOUYE. Thank you very much, Senator Burdick.

I too wish to welcome you, sir. Any doctor that comes here recommending preventative medicine is on my team. Please proceed, sir.

STATEMENT OF DR. MARVIN O. KOLB, AMERICAN ACADEMY OF PEDIATRICS

Dr. KOLB. Thank you, sir. Mr. Chairman, Senator Burdick.

I am Marvin Kolb. I am a pediatrician from Fargo, ND. I wish to speak up for infants, children, and adolescents today, for a variety of programs that really have a significant impact on their health and welfare. This committee has a longstanding good track record in this regard, and I hope my comments and written testimony will just serve to solidify your fiscal commitments.

I think in an attempt today to address the dozen or so programs which are addressed in my written testimony, I am going to use the umbrella concept of infant mortality and morbidity. For all of these programs—the childhood immunization program, the vaccine research, MCH block grants, NIH, NICHD, ADAMHA, the child abuse and neglect, family planning, education of the handicapped, respite care—all of these programs play a significant role and are an integral part of the national policy for children's health.

For it is the survival of our infants and newborns that really shows a society cares about its children, and that is the great indicator that we need to look at. You know, in the United States today we are only 17th in the world in infant mortality, and that is a national shame in itself.

I think lack of prenatal care, I think child abuse, child neglect, substance abuse, suicide, injuries, and adolescent pregnancy are all high on the list.

I would like to highlight three programs just briefly. One is the immunization program. I think the level of Federal support is essential if we are going to continue to wipe out these diseases.

In 1982 it cost as little as $6.50 to immunize a child, whereas today it is going to cost close to $60 to immunize a child.

Second, I think you have heard a lot today about the research arm—NIH and NICHD and ADAMHA. For I think research affords us in this country a capability second to none in the world.

Of special interest to me is NICHD, NICHD where we are working on special initiatives to expand the research activities on the prevention of low birth weight, the development of a new pertussis vaccine, and a long-range plan for research for injury prevention, because once infancy is passed it is injuries—injuries, not disease—that really becomes the leader of deaths and disability in this country.

Finally, a word about the Emergency Medical Services Program, which is slated to be eliminated in the President's budget, for every year there is nearly 1 million—there are 18 million children that receive emergency medical services in this country.

And I think we need to have more funding of national demonstration projects. And I wish to commend you, Senator Inouye, for your leadership in this area. For I believe you and your staff, under the able leadership of Pat DeLeon, have really been most helpful, I think, in this area, and we truly appreciate your direction.

So Mr. Chairman, I have only touched on a small part of the many issues that I think touch children and adolescents today. Somehow these needs tend to get lost, I think, in the shuffle of this busy day. Yet, I might suggest as a parting comment: maybe next year you, Mr. Chairman, and the committee seriously consider in your hearings process a children's day, a day in which all you and the Members of Congress might hear a complete story about children.

PREPARED STATEMENT

And on that day we can all come together and talk about the health problems and the health status of our most valuable resource in our country, our children.

I thank you, sir.

[The statement follows:]

STATEMENT OF MARVIN O. KOLB

Mr. Chairman, I am Marv Kolb, M.D., a pediatrician from Fargo, North Dakota, here today representing the American Academy of Pediatrics on behalf of the infants, children and adolescents of this country. We are here today to ask for your fiscal commitment to programs and policies which create the opportunity for these young people to experience optimal growth and development and to achieve their full potential as healthy and productive citizens of the future.

Key federal programs which impact upon the health of our children and adolescents include the following:

CHILDHOOD IMMUNIZATIONS

The Federal Childhood Immunizations Program has been a remarkable success by any measure. Yet, today we are experiencing a recurrence of these dread preventable diseases, due in part to parents' fears of adverse reactions and to the skyrocketing costs of vaccines. During the first 26 weeks of 1986, the cases of measles rose in this country by 117.6 percent over the same period in 1985. The highest incidence rate occurred among children 0-4 years of age, most of whom were unvaccinated. Some states are already reporting a doubling of cases of pertussis this year. The Centers for Disease Control and other public health experts warn that within one year after relaxing immunization programs, the rise of reported cases of measles, rubella, polio, diphtheria, pertussis and tetanus would result in needless tragedy. Adequate funding to purchase vaccines, maintain surveillance activities and maintain a minimal stockpile of vaccines is needed.

Academy Recommendation: $115 million

VACCINE RESEARCH

Last year this Congress enacted, as part of Public Law 99-660, a National Vaccine Program. That law called for the Secretary of Health and Human Services to coordinate and provide direction for research on the means to induce human immunity against naturally occurring infectious diseases and to prevent adverse reactions to existing and new vaccines. No funding has been requested by the Administration.

Academy Recommendation: $22 million

MATERNAL AND CHILD HEALTH BLOCK GRANT

The Maternal and Child Health Block Grant continues to be a primary focus for child health programs. This program was designed to: 1) assure mothers, children, adolescents, and families access to quality health care; and 2) interact with all other federal programs affecting mothers, children and adolescents to focus resources, lower duplication of programs and services, and reduce fragmentation at the service delivery level. The mission of the maternal and child health block grant is large and lofty. To discharge this mission Congress should support this program at its full authorization level.

Academy Recommendation: $557 million

NATIONAL INSTITUTES OF HEALTH

Support for basic research rests on the premise that the long-term economic strength of this nation and the continued improvement in the well-being of its people demand a sustained investment in scientific research. Specific activities in the pediatric area include research in the causes, treatment and prevention of infant mortality and morbidity, infectious diseases, dental carries and periodontal diseases, and AIDS. This research represents only a small percentage of the all research being funded through NIH.

The "core" of maternal and pediatric research is carried out at the National Institute for Child Health and Human Development (NICHD). Among special emphases at NICHD is expanded research activities in the prevention of low birth weight. The program includes increased research on intrauterine growth retardation (IUGR) and prevention of premature labor, the two factors responsible for low birth weight. Additionally, NICHD-supported scientists discovered that human surfactant, a lung lubricant, should be administered to very premature infants within seconds after birth. This substance reduces the incidence and severity of breathing problems, cuts their death rate, and shortens their hospital stay. This treatment has the potential to prevent approximately 8,000 deaths each year. Through genetic engineering, a pertussis vaccine has been developed which promises to be more effective as well as safer. Excitement over this news is tempered by the high costs of such trials and additional money must be targeted to this effort. NICHD has prepared a long-range plan for increasing research emphasis on injury prevention. Identifying and studying the behavioral and environmental variables responsible for injuries should lead to preventive methods which will save children's lives. Injuries continue to be the major cause of death for children after the first year of life.

Academy Recommendation: NIH be funded at $7.452 billion

NICHD be funded at $497,030,000 million

ALCOHOL, DRUG ABUSE AND MENTAL HEALTH ADMINISTRATION (ADAMHA)

With the rise of substance abuse, both alcohol and drugs, among our young people, resources must focus on the critical role of ADAMHA. We are particularly pleased to note the special initiatives of this Administration at research, the training of professionals, and public education efforts directed at children and adolescents. We commend these activities to you.

Academy Recommendation: $590 million

CHILD ABUSE AND NEGLECT

Child maltreatment is clearly one of the most difficult issues facing our children and our society. Moreover, the problem is self perpetuating. Without treatment and attention, abused children are more likely to abuse their offspring, and so the cycle continues. Tragically, we have just begun to implement what we know, so that abused children still are never identified; others are never treated -- we fear that many die.

In the past five years we have witnessed a dramatic change in public, private and professional awareness of child abuse and neglect. We have advanced our knowledge about child maltreatment and developed effective programs, approaches and practices. Notably, our research and evaluation efforts have become more sophisticated and confirm that we do know how to prevent and to treat the most prevalent forms of abuse. Federal efforts, particularly during the past two years, have dramatically improved.

Academy Recommendation: $50 million

FAMILY PLANNING

Family planning services are provided through the Public Health Service to expand and improve the availability of such services to all persons desiring them, particularly low-income women. Grants are awarded for the establishment and operation of voluntary family planning projects and for the development and dissemination of family planning information and education among other purposes. The provision of such services to adolescents remains a critical element in solving the problem of teenage pregnancy. Maturing young people cannot always get the necessary information in a family or school setting. These adolescents cannot be ignored.

Academy Recommendation: $155.5 million

PRIMARY CARE TRAINING

More than ten years ago, Congress created a program to promote the graduate education of physicians specifically trained for the practice of primary care pediatrics. The care of children and adolescents today is more than acute illnesses or specialty treatment. Their health depends on a physician who has been trained to treat the social and behavioral ills as well as the medical.

Practitioners who have been trained through this program have indeed become general pediatricians rather than seeking further specialization. The program directors at the training institutions feel the entire curricula has been improved by the addition of faculty and studies devoted to behavioral and psychosocial medicine as well as by the increased development of ambulatory and community-based clinics affiliated with the training institution.

Academy Recommendation: $18.5 million

PEDIATRIC EMERGENCY MEDICAL SERVICES

Nearly 18 million children receive emergency medical services annually with as much as 55 percent of all deaths up to age 15 due to injuries. Congress recognized the imperative need to improve emergency medical services to children when it authorized funds for demonstration programs for emergency medical services for children as part of the Preventive Health Services Block. Although the Administration budget proposes to eliminate these programs, we believe a more haphazard approach could lead to longterm disabilities or deaths, an expensive price for society to bear by any definition. Legislation is pending to fund 9 more pediatric programs nationally.

Academy Recommendation: $10 million

EDUCATION OF THE HANDICAPPED (P.L. 99-457)

With the passage of the law, Congress has authorized monies for states to develop systems to provide early intervention services to infants and children with disabilities from birth. This represents a significant national commitment to the idea that early services are critical if children with disabilities are to reach their developmental potential.

Academy Recommendation: $100 million

RESPITE CARE/CRISIS NURSERIES

Last year the Children's Justice Act (P.L. 99-401) authorized $5 million for respite care demonstration projects and $5 million for crisis nurseries for infants and young children with disabilities. These programs have proven to be effective in reducing stress and keeping families with disabled children together.

Academy Recommendation: $10 million

In conclusion, we commend you for your past interest and support. We look forward to working with you on improving the health status of our most precious resource -- our children.

Senator INOUYE. Thank you very much, Dr. Kolb.

I am certainly well aware that the chairman of this committee and the ranking member, Senator Chiles and Senator Weicker, I think have been in the forefront in supporting children's programs, and I am certain they will continue.

The recommendations you have made I think are valid, and I am certain that when the dust clears you will be very pleased with what we come out with.

Dr. KOLB. Thank you, sir.

Senator INOUYE. So we are hopefully on your wavelength. We will do our best.

Thank you.

Dr. KOLB. Thank you, sir.

STATEMENT OF JUDITH MELSON, CERTIFIED NURSE-MIDWIVES, AMERICAN COLLEGE OF NURSE-MIDWIVES

Senator INOUYE. Our next witness represents the American College of Nurse Midwives, Ms. Judith Melson.

Ms. MELSON. Thank you. My name is Judith Melson. I am director of Nurse-Midwifery in the Graduate Nursing Program at Georgetown University. Today I am representing the American College of Nurse-Midwives, and thank you for the opportunity, on behalf of both the membership and the aspiring nurse-midwives of the United States.

I submit this testimony in support of adequate appropriations for the nurse education amendments of 1985 and moneys for maternal and child health care in the United States. As you know, Senator, the American College of Nurse-Midwives is a professional organization for CNM's in the United States.

A certified nurse-midwife is a registered nurse with advanced training who cares for women and their infants during the childbearing years. There are approximately 2,600 nurse-midwives in the United States.

We appreciate this opportunity to address this issue and to urge Congress to fund nurse-midwifery and nursing education programs at the full amount as authorized in the 1985 law. These levels recommended by ACNM and by the coalition of 234,000 specialty nurses are attached in a report from the coalition for the record.

Some 25 of America's outstanding colleges and universities now offer educational programs which lead to certification as a nurse-midwife. The Federal moneys that have been spent over the past 10 years on nurse-midwifery education have been repaid many times over by services to the poor and underserved in the United States.

Almost 40 percent of practicing nurse-midwives provide health care to the underserved, including the Indian Health Service and many of our inner city areas. This is especially important in light of information which indicates that obstetricians are caring for smaller numbers of Medicaid clients.

As you know, nurse-midwifery is a safe and cost effective alternative. A number of studies have shown that care by nurse-midwives increased utilization of prenatal care facilities and such care lowers the risk of low birth weight, prematurity, and neonatal death.

Recent reports by the National Academy of Sciences Institute of Medicine, the Southern Governors Association Task Force on Infant Mortality, and the Children's Defense Fund highlight nurse-midwives outstanding contribution to prevention of low birth weight and mention enormous cost savings in providing excellent prenatal care.

In the District of Columbia, Georgetown's midwifery program provides nurse-midwifery care to adolescents in conjunction with the health department. We show a rate of 6.2 percent low birth weight in contrast to 13.2 percent for the city as a whole.

We are pleased to report to Congress that professional liability insurance is available to nurse-midwives throughout the country, still working out a few areas.

Continued growth of nurse-midwifery in the United States will help address two serious national health problems, the persistently high rate of low birth weight and premature births and the rising cost of health care. The funding which assists in the education of nurse-midwives is essential to continue and expand these programs.

PREPARED STATEMENT

We thank you and the Congress of the United States for your support and your wisdom and leadership on all health care concerns. Thank you.

[The statement follows:]

STATEMENT OF JUDITH MELSON

I am representing the American College of Nurse-Midwives (ACNM). It is a pleasure to be here today to speak in support of adequate funding for the Nurse Education Amendments of 1985, Title VIII of the Public Health Service Act.

The American College of Nurse-Midwives is the professional organization for Certified Nurse-Midwives (CNMs) in the United States. The ACNM is autonomous from all other professional organizations and speaks for its membership on all issues affecting the practice, education, recognition, legislation and economics of nurse-midwifery. A certified nurse-midwife is a registered nurse with advanced training who cares for women and their infants during the childbearing years. Although certified nurse-midwives independently manage the care of healthy women and newborns each nurse-midwife is affiliated with a physician who is a available for consultation or referral if needed. There are approximately 2600 nurse-midwives in the United States.

President's 1988 Budget Request

The President's 1988 budget request eliminates all funds for the education of nurses, including nurse-midwives. We appreciate this opportunity to address this issue and to urge Congress to fund these programs at the full amount as authorized in the 1985 law (Appendix A).

Nurse-Midwifery Educational Programs

Twenty-five of America's outstanding colleges and universities now offer the theoretical and clinical course work in midwifery that leads to certification as a nurse-midwife.

The names and addresses are attached (Appendix B). These programs educate approximately 250 nurse-midwives each year.

The reasons that each program prepares approximately 10 students a year are complex. Most importantly, the education is faculty-intensive, often times demanding a ratio of one faculty member for each student (for example, when faculty are supervising students caring for women in labor and while assisting with the birth).

Another effect of this faculty-intensive education is the cost of this type of education. A survey of our education programs indicates that costs for these programs range from several hundred to several thousand dollars a year.

The students who represent the pool from which nurse-midwifery students are selected are nurses. Recent data from the American Nurses' Association indicates that nurses earn between $20-26,000 a year. The pool, then, does not consist of individuals who can easily pay the high costs associated with nurse-midwifery education. Compounding this problem, part-time education in nurse-midwifery is almost impossible because of the rigorous demands placed on students to be on-call for births--whenever they occur.

For these reasons, federal support of nurse-midwifery programs is vital to their continuation.

Today, you are also aware of a new trend that is further complicating the process of educating nurses to become certified nurse-midwives--less women are selecting nursing as a career. The nurse-midwifery programs are beginning to feel the shortage of nurses qualified to meet the stringent standards of the nurse-midwifery educational programs. This year, ten of our twenty five programs reported unfilled vacancies. Federal funds to the programs indirectly decrease the tuition costs while the federally-sponsored traineeships to students help to offset costs in yet another way. These funds provide incentives to students to enter these nursing programs.

Directors of all twenty-five educational programs are also seeking additional sources of funding -- from state governments, from private foundations and from faculty generating service dollars. This later practice is dependent on the state laws under which a CNM is licensed, as well as the CNM's ability to gain hospital privileges -- barriers to practice which still restrict nurse-midwifery in some areas of the country. In fact, the availability of this option for nurse-midwifery faculty is much more limited than for faculty at medical schools. Faculty are further limited since they provide care for poor patients and this type of health care service cannot subsidize the educational programs.

Return on Investment

The federal funds that have been spent over the past ten years on nurse-midwifery education have been repaid many times over by CNMs services to the poor and underserved in the United States.

Today, nurse-midwifery practices exist in all 50 states, and in many developing countries around the world. Certified nurse-midwives can be found in hospital settings, in clinics, and in privately owned birthing centers. Fortunately the tradition of providing care to the poor continues. Almost 40% of practicing CNMs provide health care to the underserved. This is especially important in light of information which indicates that obstetricians are caring for smaller numbers of Medicaid clients.

A Safe and Cost Effective Alternative

Over the years nurse-midwives have maintained a superb record of safety and client satisfaction. Nurse-midwifery is also a highly cost-effective approach to health care delivery. Hospital stays tend to be shorter and care regimens less technologically complex when not medically necessary with nurse-midwife assisted deliveries.

A Significant Contribution To Healthier Births.

A number of studies have shown that care by nurse-midwives increases utilization of prenatal care facilities, and that such care lowers the risk of low birthweight, prematurity and neonatal death. Recent reports by the National Academy of Science's Institute of Medicine, the Southern Governors' Association Task Force on Infant Mortality and the Children's Defense Fund highlight nurse-midwives' outstanding contribution to preventing low birthweight.

Availability of Professional Liability Insurance

On a positive note, and as a follow-up to the publicity which nurse-midwives received regarding the unavailabilty of professional liability insurance during the past two years, we are pleased to report to Congress that this type of insurance is available to nurse-midwives throughout most of United States.

The insurance premiums have increased from an average cost of $800/year in 1985 to a cost of $3,500/year in 1987. In addition, the limits of coverage have been reduced. As you can see, the cost of insurance, although now available, is an additional burden to the average nurse-midwife earning $27,000/year.

Summary

o The American College of Nurse-Midwives urges Congress to appropriate funding levels adequate for the educating of sufficient numbers of nurse-midwives and other nurses with advanced nurse education.

o Certified nurse-midwives have a rich tradition of providing access to care for the poor and other underserved populations. This service more

than compensates for the federal funding which has **supported the** educational programs in the past.

o Continued growth of nurse-midwifery in the United States will help address two serious national health problems -- the persistently high rate of low birthweight and premature births, and the rising cost of health care.

References

1. National Academy of Sciences, Institute of Medicine, Preventing Low Birthweight, National Academy Press, Washington, D.C. 1985, p. 158.
2. National Academy of Sciences, Institute of Medicine, Preventing Low Birthweight, National Academy Press, Washington, D.C. 1985.
3. Southern Regional Task Force on Infant Mortality, Interim Report, Southern Governors' Association. February 24, 1985.
4. Rosenbaum, Sara, The Children's Defense Fund's Adolescent Pregnancy Prevention/Prenatal Care Campaign, Washington, D.C., 1985.

Appendix A

Nurses' Coalition For Legislative Action
Supports Federal Funding of Nursing Education

The Nurse Education Amendments of 1985 support advanced nursing education. The funds help prepare nursing specialists, nursing administrators and nurse educators-- the nursing leaders of tomorrow.

SUMMARY OF BUDGET ALLOCATIONS (in millions)

NURSE EDUCATION	FY 1986 as enacted	FY 1987 - Actual	Coalition Recommends for FY 1988 Appropriation
Advanced Nurse Training	16.5	16.750	17.5
Nurse Practitioner & Nurse-Midwifery	12.	12.	12.
Nurse Anesthesists	0.8	.800	0.8
Traineeships	11.5	11.750	13
Special Projects	9.5	9.5	9.5
Demonstration Projects	1.35	1.675	2.7
Faculty Fellowships	0.55	.825	1.1
Total	52.5 million	53.3 million	56.6 million

SUMMARY OF PROVISIONS OF THIS LAW AS IT EFFECTS THE EDUCATION OF NURSES.

1. Advanced Nurse Education
   Provides funds to collegiate schools to plan, develop, operate, expand or maintain nursing education at the masters' and doctoral levels.

   o Center for Disease Control study shows nurses are successful in decreasing hospital-acquired infections.

   o In nursing homes, RNs reduce costs by decreasing accidents and medication errors.

   o A study in industry reports health care costs savings of $75,000 after one year of employing a nurse practitioner.

II. Nurse Practitioners And Nurse-Midwives

Provides funds to plan, develop and expand educational programs for nurse practitioners and nurse-midwives.

- OTA analysis (case study #37) of nurse practitioners and nurse-midwives finds: the quality of care is equivalent to that provided by physicians; the providers improve access to care in rural areas; the providers are cost-effective.
- Institute of Medicine study highlights role of nurse-midwives and nurse practitioners in preventing low birthweight babies.
- Healthier babies are born to women who received home nursing visits than to those who do not.

III. Nurse Anesthetists

Provides funds to institutions for traineeships for RN's who wish to become nurse anesthetists. Certification as a nurse anesthetist (CRNA) requires two years of full time education after the RN. These funds also allow faculty to update their credentials.

- Seventy percent of the services of nurse anesthetist are provided in rural areas.
- Cost-effective studies show that nurse anesthetists are three to four times less expensive that physician services.

IV. Professional Nurse Traineeships

Provides funds to institutions for RN's to pursue full-time study in nursing specialties such as cancer nursing, mental health, orthopaedic nursing, emergency room and trauma nursing, nephrology nursing, pediatrics, school health, occupational health, and nursing research.

V. Special Projects

- Shorter hospital stays mean sicker patients are going home, requiring the skills of qualified nurses to manage their care and assist families in coping.
- After a prolonged absence from the profession, nurses eager to re-enter the work force are provided the opportunity through funds targetted at retraining.

VI. Demonstration Projects

Funds are used to improve the collaboration between nursing education and nursing practice and to encourage graduates to practice in health manpower shortage areas.

Appendix B

Educational Programs Accredited by the Division of Accreditation, ACNM, Current as of January, 1987 (* = pre-accreditation status)

CERTIFICATE PROGRAMS:

Baylor College of Medicine
Nurse-Midwifery Program
1 Baylor Plaza
Houston, TX 77030
(713) 751-8257
Program Director: Susan Wente

Frontier School of Midwifery and Family Nursing
Hyden, KY 41749
(606) 672-2312
Program Director: Ruth Beeman
(Note: credits earned at Frontier can be applied toward M.S.N. from Case Western Reserve University)

Medical University of South Carolina
Nurse-Midwifery Program
College of Nursing
171 Ashley Avenue
Charleston, SC 29425
(803) 792-2518
Program Director: Kathleen Higgins

Stanford University
Women's Health Care Training Project
703 Welch Road, #F1
Palo Alto, CA 94304
(415) 725-5342
Program Director: Rosemary Mann

State University of New York
Health Science Center at Brooklyn
College of Health Related Prof.
Nurse-Midwifery Program, Box #93
450 Clarkson Avenue
Brooklyn, NY 11203
(718) 270-1359, 1360
Program Director: Lily Hsia

United States Air Force (USAF)
Nurse Midwifery Program
(USAF Nurses Only)
Malcom Grow USAF Medical Center
Andrews Air Force Base, MD 20331
(301) 981-6104
Program Director:
Col. Johanna Borsellega

University of California at San Francisco
San Francisco General Hospital
Bldg 20, Rm 2127, 1001 Potrero Ave
San Francisco, CA 94110
(415) 821-5106 or 8360
Program Director: Judith Flanagan

University of Medicine and Dentistry of New Jersey
School of Health Related Prof.
Nurse-Midwifery Program
65 Bergen Street
Newark, NJ 07107-3006
(201) 456-4249, 4298
Program Director: Teresa Marsico

University of Southern California
Nurse-Midwifery Program
Women's Hospital, Rm 8K5
1240 N. Mission Road
Los Angeles, CA 90033
(213) 226-3386
Program Director: Nancy Bolles

DOCTORAL:

Rush University
College of Nursing
600 S. Paulina Street
Chicago, IL 60612
(312) 942-6604
Program Director: Constance Adams

MASTERS:

Case Western Reserve University (M.S.N.)
Frances Payne Bolton School of Nursing
2121 Abington Road
Cleveland, OH 44106
(216) 368-2532
Program Director: Claire Andrews

Columbia University (M.S.)
Graduate Program in Nurse-Midwifery
School of Nursing
617 West 168th Street
New York, NY 10032
(212) 305-3417 or 2808
Program Director: Betty W. Carrington

Emory University (M.N. or M.N./M.P.H.)
Nell Hodgson Woodruff School of Nursing
Atlanta, GA 30322
(404) 727-6918
Program Director: Elizabeth S. Sharp

Georgetown University School of Nursing (M.S.)
Graduate Program Nurse-Midwifery
3700 Reservoir Road, NW
Washington, DC 20007
(202) 625-6993
Program Director: Judith Melson

Oregon Health Sciences University (M.S.N.)
School of Nursing, Dept. of Family Nursing
Nurse-Midwifery Program
3181 S.W. Sam Jackson Park Road
Portland, OR 97201
(503) 225-8383
Program Director: Carol Howe

University of California at San Diego (M.S.N.)
UCSF/UCSD Intercampus Graduate Studies
Family Nurse Practice, Nurse-Midwifery
University of CA, San Diego, T-009
La Jolla, CA 92093
(619) 294-3685
Program Director: Vanda Lops

University of Colorado (M.S.)
Health Sciences Center
School of Nursing Graduate Program
Nurse-Midwifery Program
Box C 288, 4200 East 9th Avenue
Denver, CO 80262
(303) 394-8654
Program Director: Joyce Roberts

University of Florida (M.S.N. or M.N.)
College of Nursing, P.O. Box J-197
J. Hillis Miller Health Center
Gainesville, FL 32610
(904) 392-4214

University of Illinois at Chicago (M.
Health Sciences Center
College of Nursing
Dept. of Maternal-Child Nursing
Nurse-Midwifery Program
845 South Damen Avenue
Chicago, IL 60612
(312) 996-7937
Program Director: Diane Boyer

University of Kentucky (M.S.N.)
College of Nursing
760 Rose Street
Lexington, KY 40536-0232
(606) 233-5406,
Program Director: Marilyn Musacchio

University of Miami (M.S.N.)
School of Nursing
1540 Corniche
Coral Gables, FL 33124
(305) 284-3619
Program Director: Theresa Gesse

University of Minnesota (M.S.)
School of Nursing, 6-101 Unit F
308 Harvard Street
Minneapolis, MN 55455
(612) 624-6494
Program Director: Kathleen Dineen

University of Pennsylvania (M.S.N.)
School of Nursing
Graduate Program in Nurse-Midwifery
Nursing Education Building/S2
Philadelphia, PA 19104
(215) 898-4335
Program Director: Joyce Beebe Thompsc

University of Utah (M.S.)
College of Nursing
Graduate Program in Nurse-Midwifery
25 South Medical Drive
Salt Lake City, UT 84112
(801) 581-8274
Program Director: Joyce Cameron Fost

Yale University (M.S.N.)
School of Nursing
Maternal-Newborn Nursing/
Nurse-Midwifery Program
855 Howard Avenue, Box 3333
New Haven, CT 06510
(203) 785-2423
Program Director: Helen Varney Burst
(Note: combined program offering
both nursing and nurse-midwifery)

Senator INOUYE. Thank you very much, Ms. Melson.

I am certain you are aware that last year we appropriated $53 million for nurse training, and the administration recommended zero.

Ms. MELSON. Right.

Senator INOUYE. I am authorized to advise you that the chairman of the committee, Senator Chiles, will be recommending full restoration.

Ms. MELSON. Thank you very much.

Senator INOUYE. We are well aware of the quality service that certified nurse-midwives provide and the cost effectiveness of it.

My question has nothing to do with this program, but how are you doing with the insurance crisis?

Ms. MELSON. It is worked out. There are a few States, I think there are five or six States, where the insurance commissioners and the consortium of companies that is representing us have not finalized details. But in the majority of the States, it is in full force and we are doing very well.

And we thank you very much for your support last summer in allowing that to happen.

Senator INOUYE. You have got a good friend sitting right here, Dr. DeLeon.

Ms. MELSON. Right.

Senator INOUYE. So I think you should make him an honorary nurse-midwife or something like that. [Laughter.]

Ms. MELSON. Right.

Senator INOUYE. Thank you very much.

Ms. MELSON. Thank you.

STATEMENT OF ROBERT H. TAYLOR, M.D., THE AMERICAN ACADEMY OF FAMILY PHYSICIANS

ACCOMPANIED BY T. BRIAN THAMES, M.D.

Senator INOUYE. Our next witness represents the American Academy of Family Physicians, Dr. Robert H. Taylor. And I gather that you are accompanied by Dr. T. Brian——

Dr. TAYLOR. Thames.

Senator INOUYE. Thames, of Orlando, FL. And so you must be a friend of Senator Chiles.

Dr. THAMES. Yes, sir.

Senator INOUYE. Then you are going to get everything you want here.

Dr. THAMES. Thank you, sir.

Senator INOUYE. Please proceed.

Dr. TAYLOR. Senator, I understand that this is a day of celebrities and, although I am Robert Taylor, my main claim to fame is being a family physician in active practice in Spartanburg, SC, and I am well acquainted with another Senator on your panel.

I am also president of the American Academy of Family Physicians, and we this year have 59,000 members. That is a substantial increase over the years, but in spite of that we are the one specialty still found to be in short supply. So we still have need of your help.

In addition, I would like to thank you very much for the support you have given family physicians in our movement during the last few years, when the administration sought to take us from the budget and you elected to keep us in.

This year, I would point out that the administration has seen the light at least in part, and they do include us in the budget, although the amount is not adequate. And we are asking that you support our residency training programs to the full authorized amount and also our family practice departments and medical schools to the full authorized amount.

And the amount for medical schools is $7 million. The amount for residency training programs is $39.4 million.

If you wonder why sometimes, with all these residency training programs, we still need money to keep going, the reason is that many of our family practice procedures are designed to be done on an ambulatory basis, that is out of the hospital.

They are designed in the way of prevention, early diagnosis, early treatment. We do not have many big ticket items, so we do not really generate the money that we need to keep going.

Incidentally, part of that problem is the discriminatory Federal reimbursement system, which pays less for family physicians than it does for some other specialists for the same procedure. It also pays less for our doctors in rural areas than it does in urban areas for the same procedure.

And the funds that you provide do help us in some manner, some measure, to make up for that, but it hasn't really solved the problem. We are hoping that some other things which are taking place now may help us even more.

Senator INOUYE. Would you send this committee a memo on this discrimination that you just spoke of?

Dr. TAYLOR. I would be delighted, yes, sir.

Also, you may not be aware of it, family practice is the only medical specialty which since its beginning has had a major part of its training and residencies devoted to care of the elderly. Geriatrics has been, is, and will continue to be a major portion of our endeavors.

At this point, we are the major specialty treating the elderly in this country, and we are anxious to continue to do that and I am sure we will.

PREPARED STATEMENT

I will not attempt to recap all of our written testimony, but to say we thank you very much for your support in the past and we would certainly appreciate it if you could arrange for us to have the full authorization this year to continue our training programs.

I would be pleased to try to answer any questions.

[The statement follows:]

STATEMENT OF ROBERT H. TAYLOR

Mr. Chairman, I am Robert H. Taylor, M.D., President of the American Academy of Family Physicians. On behalf of our more than 59,000 members, we are pleased to appear before you today to discuss educational programs in family practice, and to ask you for your continued support.

Federal support has made a significant contribution to the development and success of family practice education in this country. Since family practice formally came into existence in 1969, the number of accredited residency programs in family practice has increased from 46 in 1970 to 381 in July of 1986. As you will note on Attachment A, the number of programs has been quite stable since 1980, approximately 384, and the current 381 programs graduated 2,386 residents last July.

Federal funds help support family practice residency programs through Section 786 of the Public Health Service Act and departments of family medicine in medical schools through Section 780 of the Public Health Service Act. The FY 87 appropriation is $36 million for Section 786 and $7 million for Section 780.

The American Academy of Family Physicians urges Congress to appropriate funds of $7 million for departments of family medicine and $39.4 million for family practice residency programs in Fiscal year 1988. These funding levels reflect the authorizations approved for the programs and would continue the federal commitment to ensuring access to quality health care for the American public.

The funds authorized by Section 786 have been used to establish, to maintain and to improve family practice residency programs, and currently support 272 projects. The funds authorized under Section 780 fund 57 grants for family medicine administrative units in medical schools to strengthen their education resources, for example, by providing additional curricular emphasis on prevention, early diagnosis and treatment, ambulatory care and continuity of care. The funds appropriated for family practice education at the medical school and residency program levels are not large in terms of the budget, yet have a highly significant impact on the ability of family practice training programs to operate, and to accomplish the goal of training well qualified family physicians.

Family practice programs tend to be financially fragile and quite vulnerable in time of fiscal retrenchment, due to the unique characteristics of family practice residencies that affect their expenses and income. With the emphasis on ambulatory training, as opposed to most postgraduate training which is done on an inpatient basis, family practice programs incur expenses outside the hospital setting which are not reimbursed by third party payers. In addition the income of family practice training programs from patient care revenues is lower than for other medical specialties due to significant payment differentials inherent in Medicare payment policies--differentials between payment for physicians cognitive and procedural services, for physicians of different specialties providing similar services, and for physicians in rural and urban areas. Also, the emphasis on early diagnosis and treatment creates a situation where cost per patient is less, and therefore monies generated per patient visit are significantly less than visits to subspecialty training programs to treat diseases in their advanced stages. The federal grants help offset some of these financial disincentives. We are encouraged that the Physician Payment Review Commission (PPRC) is focusing on these payment differentials, and will be making recommendations to Congress, which ultimately may help family practice programs. The Academy encourages the adequate funding of PPRC to permit this Commission to continue its examination of the Medicare reimbursement system.

Family practice has a solid track record of helping to address the national problems of specialty and geographic maldistribution of physicians, and of improving access to quality medical care.

As Attachment B emphasizes, graduates of family practice residency programs are locating their practices in rural and physician shortage areas, helping to alleviate the geographic maldistribution of physicians in this country. For example, over 30% of 1986 graduates located in small towns not within 25 miles of an large city. Improved access to medical care by rural and underserved populations has been a direct result of the training of family practice residents.

Family physicians are trained to provide comprehensive, preventive, cost-effective, ambulatory based care to people of all ages, including the geriatric population, and this has a long term positive impact on the health care system given the expanding elderly population. The recommended Core Curriculum Guidelines on Aging and Care of the Aged which were developed and endorsed by the AAFP, STFM and American Geriatrics Society emphasize the commitment of family practice educators to integrate caring for the aged into the residency experience. These guidelines are outlined in Attachment C.

Despite a projected national surplus of most health professionals by the end of this decade, the need for more family physicians continues throughout the country. This need is emphasized in the President's budget proposal, which, for the first time in several years, targets family practice training for continued support. However, the level called for by the Administration is substantially less than the current FY 87 appropriation and would result in a significant disruption of training.

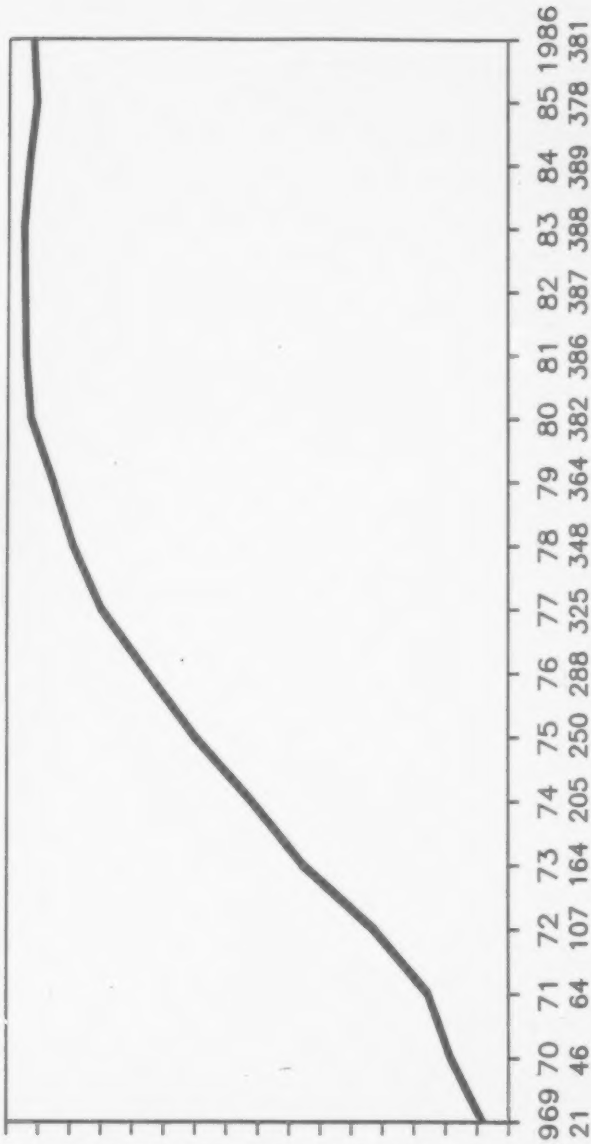
The federal investment in family practice education has yielded improvements in health care for the American people, helping to correct specialty and geographic maldistribution, and to increase access to comprehensive, quality, cost-effective medical care.

To maintain the Congressional commitment to high quality family practice education, we strongly urge this Subcommittee to appropriate $7 million for departments of family medicine and $39.4 million for residency programs in family practice.

ATTACHMENT A

AAFP Reprint #150-B

ACCREDITED FAMILY PRACTICE RESIDENCIES JULY 1986



The American Academy of Family Physicians

ATTACHMENT B

AAFP Reprint No. 155L

American Academy of Family Physicians

REPORT ON SURVEY OF 1986 GRADUATING FAMILY PRACTICE RESIDENTS

The total number of graduates surveyed was 2306. Of this number 1868 (81%) responded. Of these respondees, 1861 indicated the type of practice arrangement and 1595 specified the size of the community in which they plan to serve. A summary of the results as of July 1986 follows.

The data from 1977, 1978 and 1979 has been re-analyzed to conform with the 1980-1986 statistics. Caution must be excercised in comparing data previous to 1977 because of changes made to data analysis. However, the revised 1977-1979 data may be directly compared with the 1980-1986 data with confidence.

PRACTICE ARRANGEMENTS OF 1986 GRADUATING RESIDENTS

Type of Practice Arrangements	Number of Reporting Grads	Percentage of Total Reporting Grads
Family Practice Group	457	24.6%
Multi-Specialty Group	202	10.0%
Two-Person Family Practice Group (Partnership)	277	14.9%
Solo	191	10.3%
Practice (arrangement not specified)	78	4.2%
Military	139	7.5%
Teaching	37	2.0%
USPHS	185	9.9%
Emergency Room	82	4.4%
Hospital Staff	25	1.3%
Research	8	.4%
Administrative	0	.0%
Further Training	32	1.7%
Fellowship	53	2.8%
None of the above	95	5.1%
	1861	100.0%

DISTRIBUTION OF 1986 GRADUATING RESIDENTS BY COMMUNITY SIZE

Character and Population of Community	Number of Reporting Grads	Percentage of Total Reporting Grads	Cummulative Percentage of Total Reporting Grads
Rural area or town (less than 2500) not within 25 miles of large city	153	9.6%	9.6%
Rural area or town (less than 2500) within 25 Miles of large city	65	4.0%	13.6%
Small town (2500-25,000) not within 25 miles of large city	321	20.1%	33.7%
Small town (2500-25,000) within 25 miles of large city	218	13.7%	47.4%
Small city (25,000-100,000)	264	16.6%	64.0%
Suburb of small metropolitan area	63	3.9%	67.9%
Small metropolitan area (100,000-500,000)	170	10.7%	78.6%
Suburb of large metropolitan area	183	11.5%	90.1%
Large metropolitan area (500,000 or more)	119	7.5%	97.6%
Inner city/low income area (500,000 or more)	39	2.4%	100.0%
	1,595	100.0%	

ATTACHMENT C

AAFP Reprint No. 264

Recommended Core Curriculum Guidelines on Aging and Care of the Aged for Family Practice Residents

This document was developed by representatives of, and has been endorsed by, the American Academy of Family Physicians, the Society of Teachers of Family Medicine and the American Geriatrics Society.

The ultimate concern of all physicians must be the welfare of the patient. The acquisition of appropriate skill and knowledge in history taking, physical examination, and clinical and psychosocial diagnosis and management of all the types of patients the practicing family physician will encounter, must be an integral part of residency training; age and background often mandate different approaches to care.

The elderly occupy a large number of acute care hospital beds, comprise the largest percentage of nursing home residents and make more visits to physicians' offices than any other segment of the population; and this aging population will continue to grow. Yet the health care system has become geared to acute episodic rather than chronic comprehensive care.

The characteristics of family practice as a specialty match particularly well the characteristics of the elderly population and its health care needs. Whereas it is clear that people do not suddenly acquire different characteristics at an arbitrarily predetermined age, there are, nonetheless, many subtle and significant differences in the approach to diagnosis and management of older as opposed to younger adults. Also, the philosophy of comprehensive, continuing care incorporates the belief that health in later years is vitally affected by lifestyle and health care patterns established throughout life; one goal of family practice is to prepare younger adult and middle-aged patients for the changes of increasing age. Another overall goal is to assist elderly persons to function independently with self-respect, preserving lifestyles as much as possible; thus the curriculum implies a comprehensive approach to the psychosocial and economic factors affecting the aging patient as well as the patient's family.

In summary, this core curriculum provides an outline of the attitudes, knowledge and skills that should be among the objectives of training programs in family practice and which will lead to optimal care of elderly patients by our future family physicians.

Attitude

The resident should develop attitudes that encompass:

1. awareness of the importance of the physician's own attitudes to aging, disability and death.
2. compassion and humanism, balancing realism and practicality about the sometimes inevitable decline and losses.
3. the discouragement of undesirable dependence by the patient on the physician, family or other provider and the promotion of dignity through self-care and self-determination.
4. the recognition of the importance of family and home in the overall life and health of patients.
5. minimal interference, with appropriate limitation of investigation and treatment to that which would benefit the patient.
6. the approach of a lifelong learner and of a contributor, by research, to the body of knowledge about aging, health and medical management of the aging patient.
7. acceptance of input by others, often less highly trained individuals who have intimate and valuable knowledge of individual patients and aspects of care.
8. continuing accessibility and accountability for his or her patients.
9. the importance of cost containment.

Knowledge

The resident should develop knowledge of:

1. the underlying physiological "normal aging" changes in the various body systems, including their diminished homeostatic abilities and other changes that directly relate to assessment and treatment of elderly patients; this includes the interrelationships because of concurrent changes in multiple systems and includes the altered metabolism and effects of drugs.
2. the normal psychological, social and environmental changes of aging, including the reaction to common stresses and changes such as retirement, bereavement, relocation and ill health, and the changes in family relationships that will affect elderly health care.
3. the uniqueness of the modes of presentation of elderly patients for care, including the altered and non-specific presentations of specific diseases.
4. the tendency of elderly patients toward a) iatrogenic disease, b) immobilization and its consequences, c) dependency or d) long-term institutionalization while in the process of receiving medical care.
5. the means for promoting health and health maintenance through screening, preventive care and early diagnosis, and the assessment of risk factors.
6. the range of services available to promote rehabilitation and reacquisition or maintenance of an independent lifestyle for elderly people, increasing their ability to

function as long as possible in their existing family, home and social environments.
7. the place of the house call, its indications and benefits in the assessment and management of elderly patients.
8. the characteristics of the various types of long-term care facilities and alternative housings available to the elderly.
9. the pitfalls of geriatric care such as polypharmacy, iatrogenic illness, over-dependency, inappropriate institutionalization, nonrecognition of treatable illness, overtreatment, inappropriate use of high technology, the unsupported family, etc.
10. the financial aspects of health care of the elderly and the way these influence health care patterns and decisions.
11. the means to actively promote health in the elderly through exercise, nutrition and psychosocial counseling.
12. the following problems, which are either especially characteristic of older patients, or differ significantly in their presentation and/or management in older adults:
    - Abuse, Physical and Psychological
    - Acute Abdomen
    - Alcoholism and Other Substance Abuse
    - Anorexia
    - Atypical Malignant Syndromes

    - Bacteriuria
    - Bereavement

    - Catheterization
    - Completed Stroke
    - Confusion
    - Congestive Heart Failure
    - Constipation
    - Contractures

    - Degenerative Joint Disease
    - Dehydration
    - Dentition
    - Depression
    - Diabetes
    - Dizziness
    - Drug-Induced Illness

    - Falls
    - Fecal Impaction
    - Femoral (and Other) Fractures

    - Gait Disorders

    - Hearing Loss
    - Hypertension
    - Hypothermia
    - Hypothyroidism

    - ICU Syndrome
    - Incontinence

    - Malnutrition
    - Memory Loss
    - Myocardial Infarction

    - Osteopenia/Osteoporosis
    - Other Respiratory Infections

    - Pain
    - Perioperative Problems
    - Pneumonia
    - Podiatric Problems
    - Postural Hypotension
    - Pressure Sores
    - Psychological Effects of Illness

    - Sexual Problems
    - Skin Cancers
    - Speech Disorders
    - Stiffness
    - Systolic Hypertension

    - Terminal Care
    - Transient Ischemic Attacks
    - Tremor/Parkinsonism
    - Thromboembolism

    - Urinary Tract Infection

    - Visual Loss

Skills

The resident should develop skills in:

1. obtaining a comprehensive **history**, utilizing all available sources of information.
2. comprehensively conducting an efficient **physical examination** in the office, hospital and nursing home settings, mindful of the patient's modesty and mobility, yet balancing the need for full examination.
3. the selection and interpretation of **diagnostic procedures**.
4. the selection and conduct of **house calls**.
5. the development of **problem lists** in practical, clinical, functional, psychological and social terms.
6. the setting of appropriate **priorities** for investigation and treatment.
7. the **limitation** of investigations or treatment.
8. **communication** to the patient and/or caregivers of the proposed investigation and treatment plans in such a way as to promote understanding, compliance and appropriate attitude.
9. the ability to communicate hope and empathy, and to **balance objectivity** with human involvement.
10. **counseling** regarding the psychological, social and physical stresses and changes of increasing age, dying and death.
11. the **coordination** of the range of services available with the patient's support systems and needs.
12. the **integration** of factors in the patient's family, home and general lifestyle into the diagnostic and therapeutic process.
13. **consultation** with physicians and other health professionals, including the critical evaluation and selective use of consultant advice and the integration of management in critical care situations.

Implementation

The implementation of this core curriculum should be longitudinal, throughout the resident's experience. Such curriculum content should be a requirement, and an integral part of the residency program. It should be integrated into the schedule of conferences, and be a prominent part of the available library facilities. Evaluation of the effectiveness of the program is crucial.

Physicians who have demonstrated skills in caring for the aged, and have a positive attitude towards the aged, should be available to act as role models to the residents, and should be available to give support and advice to individual residents in the management of their own patients. A multidisciplinary approach, coordinated by the family physician, is an appropriate way of structuring teaching experiences in this area. Individual attention and small group discussion will help promote appropriate attitudes, especially in residents with individual attitudinal problems.

The resident must have responsibility for patients, and be active as the decision maker and case manager. A significant number of elderly patients should be a part of each resident's family practice panel of patients, and should include the healthy, those with minor health problems, the chronically ill, the critically ill, the acutely ill and the injured patient. Thus the resident should have as a requirement the experience of continuing care of aged patients in the ambulatory setting, but also in the home, hospital and long-term care facility.

Residents planning to serve as medical directors of long-term care facilities should receive additional training and experience.

Precise details of the implementation will clearly depend on locally available facilities and faculty, and preexisting programs, and the attitudes and level of interest of the existing residents.

Senator INOUYE. Well, I can tell you, because I have the authorization from the chairman, that he will recommend a full restoration of the cuts.

Dr. TAYLOR. Thank you very much.

Senator INOUYE. And as a member of this committee, I am very pleased with this new interest in revival of the family physician, because many of us were brought up with family physicians, unlike today where everything is specialized. You go to one doctor for an eye problem, another for a nose problem, and something else for a back problem.

We look forward to doctors who make house calls, too.

Dr. TAYLOR. Thank you, sir. I think it is time that we realize that we need a new standard of care, and that is that care that is provided by the well trained family physician.

Senator INOUYE. And the aspect that we admire in your practice is the preventative nature. As I said earlier in my remarks, as a nation we spend 50 cents per person for prevention and $1,440 for curative medicine.

Dr. TAYLOR. We totally agree.

Senator INOUYE. And if we just increase that 50 cents to $1, you can cut down the curative medicine by more than one-half. And that is cost effectiveness. But it has not come across too many of us yet. Some day it will.

As you know, the chairman of this subcommittee has another very important assignment, the Budget Committee. If it were not for that, I am certain he would be here to personally greet you, sir.

Dr. THAMES. Thank you, sir.

Senator INOUYE. He has asked me to recognize you and tell you that he is very pleased to have you here.

Dr. THAMES. Thank you very much.

Senator INOUYE. Thank you very much, doctors.

STATEMENT OF DR. MARJORIE BOWMAN, THE SOCIETY OF TEACHERS OF FAMILY MEDICINE

Senator INOUYE. Our next witness represents the Society of Teachers of Family Medicine, Dr. Marjorie Bowman.

Dr. BOWMAN. Thank you for the opportunity to testify. I think you may have given some of my testimony for me.

The Society of Teachers of Family Medicine represents the educators of family medicine and more than 2,500 people. They are physicians, Ph.D.'s, other medical specialists, et cetera, who teach in family medicine.

Since family medicine is a medical specialty which emphasizes continuous and comprehensive care of individuals and families in the context of their immediate environment, their work, and their community, they emphasize humanism, preventive medicine, behavioral sciences, and help people to help themselves.

Family physicians are cost-effective providers, emphasizing quality ambulatory medical care. Family medicine graduates stay in family medicine and they practice in areas of need. This means that the Federal dollars for family medicine have been well utilized as a long-term investment in the health care of the people of our country.

The education for family medicine is funded in multiple ways. Patient care dollars have provided much of the money for medical education in many specialties, but it falls far short in family medicine.

As you noted, the amount we spend on preventive medicine is much less than we spend on acute care. This means that the dollars are not available for training in these areas. The Federal funds have been crucial to the development of the family medicine training programs. It has been estimated that 90 percent of the graduates of family practice residency training programs have been from programs that have received some amount of Federal training support.

Federal funding has helped programs to increase resident enrollment, thus helping us have more family physicians in this country.

The comment was made earlier that family medicine is not as well reimbursed as other specialties. This has been true and continues to be true, and in general family physicians have dropped in relationship to other specialties in terms of their reimbursement.

They are discriminated against currently in the Federal reimbursement system, and the administration, in spite of the fact that there has been a lawsuit won in Michigan saying that they could not discriminate on the basis of specialty for the same procedures, have decided that this is not to be implemented throughout the country, and this gives us great problems.

This has been highlighted in a recent editorial in the New England Journal of Medicine by a general internist, who notes that his income has dropped for each of the last several years and that many of the physicians in his area are leaving because of inadequate income, and he is considering doing the same thing.

Family physicians have even more problems than the general internist when it comes to this. Other specialists are often paid several times more for the same service than are family physicians.

In my immediate area, for a routine office visit the prevailing charge allowed for a general internist is more than twice as much as for a family physician. In addition, the difference between the rural and urban family physicians is substantial.

This means that we have difficulty funding our training programs from patient care dollars. Other than patient care dollars, there is limited other funding available for family medicine education.

PREPARED STATEMENT

Thus, we would like to thank you for your support in past years and hope that you will continue your support for family medicine education in the amount of $7 million for section 780 and $39.4 million for section 786, as was authorized.

Thank you.

[The statement follows:]

STATEMENT OF MARJORIE A. BOWMAN

The Society of Teachers of Family Medicine would like to thank the committee for allowing it to present this written testimony in support of sections 780 and 786 of the Public Health Service Act, the aspects of the appropriations that are of most immediate concern to us.

The Society of Teachers of Family Medicine represents more than 2500 educators (including family physicians, other medical specialists, and behavioral scientists) who are involved in teaching family practice to medical students and residents.

Family Practice is a medical specialty which emphasizes continuous and comprehensive care for individuals and families in the context of their immediate environment, their work, and their community. Family physicians emphasize humanism, preventive medicine and behavioral sciences, and particularly work to help people help themselves. Family physicians are cost-effective providers, emphasizing quality ambulatory medical care, avoiding hospitalization when possible, and using laboratory and diagnostic studies judiciously. Their ongoing contact with the individual and family allows for appropriate consideration of the full medical and social history while caring for the patient.

Family medicine is a relative new speciality, beginning in 1969 with the establishment of the American Board of Family Practice. Most major studies over the years have noted an insufficient number of family physicians. The conclusion by the recent Graduate Medical Education National Advisory Committee (GMENAC) that there would be a sufficient supply of family physicians rested on the assumption of a steady trend in the number of residents in training, an assumption that could be untrue if Federal dollars are decreased. GMENAC thus recommended that there be continued Federal support of family medicine residency training programs.

Many family medicine graduates practice in areas of need. As compared to other specialities they are more likely to locate in more rural areas; about half of the graduates of family medicine residency programs practice in towns or areas of 25,000 people or less. Family medicine graduates also stay in family medicine; very few enter other specialty training after their residencies.

Family practice residency education has more training in an ambulatory setting than do other specialities. At least one quarter of the training time is in a Family Practice Center; at least an additional one quarter of the residents' time is spent in other ambulatory settings. Medical students who have family practice experiences spend most of that time in family practice offices.

The education for family medicine has been funded in multiple ways. Hospitals have contributed much support. Some state governments have provided a level of support. Teaching programs also provide care to patients and some money derives from this course. Medical schools have contributed a small amount of support. In addition, the Federal government has provided support through federal training grants under Sections 780 and 786.

These Federal funds have been crucial to the development of family medicine. It was estimated that over 90% of graduates of family practice residency training programs have been in programs that received some amount of Federal funding. Federal funding has helped programs to increase resident enrollment, thus providing more graduates for the practice of family medicine, a good long-term investment.

One questions that frequently arises is, "Why should family medicine need Federal dollars for the support of its training programs?" While there are several reasons, most of the reasons revolve around patient care reimbursement and the design of family medicine education.

Family medicine is primarily an outpatient and cognitive speciality. This means that family physicians spend most of their time in the office seeing patients, rather than in the hospital or specifically doing procedures. It has been recognized that outpatient activities and those involving non-procedural, thinking types of care are less well reimbursed. Per hour the physician gets less pay. For Medicare patients, this has been magnified by recent changes, such as the fee freeze and determinations of maximum allowable charges. A recent editorial in the New England Journal of Medicine highlights these issues for general internists. The general internist writes that his income has dropped for each of the last several years and that other physicians in the area are leaving because of inadequate income.

Family physicians have even more problems than do general internists. Family and general practitioners are separated from other specialists in determining potential fees. Other specialists may be paid several times as much for the same service as is a family physician. In my immediate area of the country, many family physicians are not taking new Medicare patients because the rates are too low to adequately cover office overhead, let alone pay the physician for the time spent. Family practice continues to be one of the lowest paid specialities, and has been losing income when accounting for inflation.

Medical education has been heavily funded by patient care dollars. Whether or not this is fully appropriate will not be debated here. Because of the problems in reimbursement in family medicine and outpatient medicine, it is difficult to readily fund family medicine training from patient care dollars. In addition to lower collections relative to hospital based procedure-oriented specialties, education in a primary care outpatient facility is more expensive, with trainees generally decreasing the efficiency of the office practice. In the hospital, patients are there 24 hours a day, thus a student can see them at different times and spend time with them without actually slowing down the process of care. In an ambulatory facility, many more patients are seen per day, and each patient is available for only a limited period of time. When a student sees a patient, an examining room is occupied for some amount of time that would otherwise be used by the attending physician. This activity further decreases office efficiency. Ambulatory experience is a must for training physicians in cost-effective medicine.

Thus, family medicine education has been more difficult to fund from patient care dollars because of (1) lower reimbursement for outpatient and cognitive activities, (2) geographic and speciality differentials in pay for the same service, and (3) inefficiencies inherent in teaching in ambulatory care settings.

Other than patient care dollars, there is limited funding available for family medicine education.

For these reasons and for the other concerns outlined in this presentation, it is vital that federal support for funding of family medicine education be maintained at current levels. We welcome and hope for your continued support of family practice education in the amount of $7 million for Section 780 and $39.4 million for Section 786.

Senator INOUYE. Thank you very much.

What is the Government's justification or rationale in paying you, reimbursing you at a lower rate than other specialties?

Dr. BOWMAN. I am not sure that they have a good rationale. Right now the rationale is that if they increase family medicine it will overall cost the system more, and they are not interested in increasing any more dollars into the system.

It was started with the original Medicare Program that the specialties were split in terms of how reimbursement was done, and over the years, with the inherent bias in the CPR system for procedural types of issues, the difference between the cognitive—that is, the more thinking types of specialties—and the procedural types of specialties has gradually increased.

Senator INOUYE. And you contend that your services are of equal quality?

Dr. BOWMAN. Yes.

Senator INOUYE. Well, if you would like to also submit us a memo to this committee, we will pursue this.

Dr. BOWMAN. Thank you.

Senator INOUYE. And as I told Dr. Taylor, we will restore the funds.

Dr. BOWMAN. Thank you.

Senator INOUYE. Thank you very much.

STATEMENT OF DR. GARY FILERMAN, PRESIDENT, ASSOCIATION OF UNIVERSITY PROGRAMS IN HEALTH ADMINISTRATION

Senator INOUYE. Our next witness is the president of the Association of University Programs in Health Administration, Dr. Gary Filerman. Welcome, sir.

Dr. FILERMAN. Thank you, Senator.

I will submit my brief testimony for the record.

Senator INOUYE. It will be made part of the record, sir.

Dr. FILERMAN. Thank you.

Senator, we are here to request your attention for a relatively small appropriation item that is in the health manpower legislation, namely an appropriation of $1.5 million for support of programs in health administration and $500,000 for traineeships.

That total of $2 million represents the total Federal investment in the direct improvement of the capacity to train management for the health care system. I could not help but be struck by the comments you have made repeatedly this morning about the differential in investment between preventive and curative services, about how serious the problems are in the effective utilization of that investment in curative services due to severe problems of management competence.

We are very accustomed to looking at the qualities of well-run hospitals, but we do not realize how often we have problems, for example, in expanding the HMO movement, which provides a competitive alternative delivery system, because there are no trained managers for HMO's.

The problems of quality of care in the long-term-care field, which we are seeing grow by leaps and bounds, because there are so few competently trained managers available to the long-term-care system, in which competent management is more critical to quality of care than anything done on the clinical side.

The growth of home health agencies, hospice, PPO's, all of the alternative systems in this country which are critical to establishing not only quality, but cost effective, appropriate care, are very severely limited by the shortage of competent management.

That means in practice that all of the millions of dollars we have heard about this morning that are expended in diabetes research and care and all the other programs, a substantial element of that falls into an area of management competence issues that are not addressed anywhere.

Our mission is to train competent management, to be sure there's a pool of talented young people who want to be health care administrators, who want to go out in the communities and make things better, who want to be sure that the life of the average citizen in the community really is impacted qualitatively by the investment, public and private, in health services.

It is a very critical public responsibility, and it is probably the most difficult management assignment in American society. And we have got to get people who are in it on purpose, not people who have backed into it because they did not succeed in something else.

That is what that little appropriation is all about.

The committee has supported it in the past. I hope you will continue to in the future.

Senator INOUYE. I am authorized to tell you you will get your full funding again.

How many health administration schools do we have in the United States? How many medical schools provide this specialty?

Dr. FILERMAN. Health administration training takes place in a variety of settings—medical schools, schools of public health, schools of business administration, public affairs, and in some free-standing, free-standing within a university centers, that bring those things together.

There is not a very clear answer as to which one of those can do the job best, and we have always encouraged all of those kinds of resources within the university to work together on this extremely complex problem. Is it a medical problem, is it a business problem, is it a social science problem?

It is all of those, and they have all got to focus on it. We have got 47 schools, most of which are quite small at the graduate level.

Senator INOUYE. How many health administrators do we have in the United States, according to your definition?

Dr. FILERMAN. It is very difficult to count, because when you look, for example, to a typical community hospital, most people would consider only the two or three people in senior management to be health administrators.

Our concept is that everybody in that institution that has supervisory responsibility and whose responsibilities end up using resources is a health administrator, and they need to be appropriately trained for whatever their administrative responsibilities are.

Under DRG's, where you have forced down through the organization more direct responsibility for controlling costs and quality at every level, everybody is a manager who has supervisory responsibility.

So it is an incredibly rapidly growing field.

Senator INOUYE. Well, we have demonstrated our support, and you can count on our continued help, sir.

Dr. FILERMAN. Thank you, sir.

Senator INOUYE. Thank you very much.

STATEMENT OF ANTHONY McNEVIN, AMERICAN ASSOCIATION OF COLLEGES OF PODIATRIC MEDICINE

Senator INOUYE. Our next witness represents the American Association of Colleges of Podiatric Medicine, Anthony McNevin.

I should tell you before you proceed that I am with the podiatrists, because a couple of years ago they gave me the greatest comfort that I have experienced over all these years. They gave me comfort from ingrown toenails. So I am with you, sir.

Mr. MCNEVINS. It is a pleasure to know you have been able to honor the profession that way. And it is an honor for me to be here this afternoon.

The association of which I am the president represents the Nation's seven colleges of podiatric medicine, some 232 affiliated public and private teaching hospitals, with externship and residency training programs for over 3,000 students and 550 residents.

As you know, Mr. Chairman, podiatric medicine is that profession which deals with the diagnosis, treatment, and prevention of diseases and disorders affecting the lower extremities. Although we may not often think about it, most of us are aware of just how important the foot is to our daily lives, especially if we are encountering problems.

What many people do not realize is that foot problems are often the early warning signs of disorders elsewhere in the body, such as heart disease, diabetes, arthritis, and musculoskeletal disorders.

Mr. Chairman, whether the result of a disease, an accident on the job, or a sports-related injury, all of us, young and old, are vulnerable to foot ailments. We know, for example, that as many as 10 percent of all children suffer from congenital foot problems that can curtail their activities and hamper their development, both physically and emotionally.

Of course, the fastest growing segment of our population also happens to be the group most at risk. For the elderly, untreated foot problems can hinder their mobility and generally limit their ability to lead independent, productive lives.

Sad to say, an estimated 95 percent of the elderly suffer from foot disorders and, according to the National Center for Health Statistics, one-fourth of all nursing home residents cannot walk as a result of foot problems. According to the Census Bureau, the over 65 population will increase 37 percent over the next 13 years. Within 50 years, the elderly population will double, from 10 percent to more than 20 percent of the total population.

Mr. Chairman, unless there is an adequate supply of podiatrists to meet their needs, many of the elderly will be forced to postpone or forego treatment altogether, only to require more extensive and more expensive health care in the future.

At present, nearly 50 percent of all patient visits to podiatric physicians are by individuals 65 years of age and plus.

Mr. Chairman, our colleges of podiatric medicine are striving hard to produce students for the profession. As a result of our efforts, the number of graduates has steadily increased over the past two decades. In fact, for the period 1976–86, first year enrollments have increased 45 percent, while at the same time, over that same period of 10 years, minority enrollment has increased 224 percent.

Despite this remarkable growth rate, there are still only 9,700 practicing podiatrists in this country, or about 1 podiatrist for every 25,000 Americans. And although the number of podiatrists has increased in recent years, the U.S. Public Health Service still characterizes this as the health profession with the most serious geographic distribution problem.

Of course, this shortage affects virtually all of us, Mr. Chairman. But the hardest hit are the elderly and those who live in rural communities and the inner cities.

Last year, Mr. Chairman, we appeared before this subcommittee and asked you that you continue to support health professions education and training programs. You did just that and we are grateful.

But once again, the President's budget proposes drastic reductions in this area. The administration has chosen to paint all disciplines with the same broad brush, claiming that there is an oversupply and, therefore, no need to sustain programs such as the HEAL Loan Program at adequate levels. Instead, the President's budget proposes to cut back funding by two-thirds, denying loans to some 2,400 students.

At the same time, the budget proposes to eliminate the only program we have that encourages students to practice in medically underserved areas in this country, the remote site training program.

I would point out, Mr. Chairman, that by limiting the availability of Federal student aid, this budget proposal would undermine the most basic tenet of our society, allowing every qualified individual an opportunity to pursue the career of their choice.

In practical terms, we would be turning our back, we would be turning the clock back in time, only when the wealthy could afford to pursue careers in the health professions.

To conclude, we again respectively urge you to provide adequate funding for health professions loans and to provide $1 million to support the continuation of the podiatric remote site training grant program.

I thank you, Mr. Chairman, and if there are any questions I would be pleased to try and answer them.

Senator INOUYE. Last year we appropriated $290 million for the Health Education Assistance Loan Program, and the administration recommends for the next fiscal year $100 million. We have authorized $305 million, and the chairman of this committee has authorized me to tell you that he supports the full $305 million.

Mr. MCNEVIN. I am very pleased to hear that, Mr. Chairman.

Senator INOUYE. We are doing our best to give you the recognition that you deserve. For example, it has come to our attention that in all of Europe, among our American naval troops, there is only one doctor of podiatry. And it seems incongruous when you consider that our soldiers are supposed to be moving on their feet.

But the medical branch of the U.S. Department of Defense has failed to give doctors of podiatry the recognition they deserve. So they have secondary positions in the medical units.

We will try to change that, sir.

Mr. MCNEVIN. Thank you very much.

PREPARED STATEMENT

Senator INOUYE. Thank you for your contribution.

[The statement follows:]

STATEMENT OF ANTHONY MCNEVIN

My name is Anthony McNevin and I am President of the American Association of Colleges of Podiatric Medicine, a nonprofit educational association.

The Association represents the Nation's seven colleges of podiatric medicine, the 232 affiliated public and private teaching hospitals with fourth-year externship and residency training programs, and 3,000 students and 550 residents. The Association also represents the continuing education programs approved by the Council on Podiatric Medical Education -- which in this past year, numbered 75 with participants in each ranging from 20 to 300 podiatrists.

Background

As you know, Mr. Chairman, podiatric medicine is that profession which deals with the diagnosis, treatment and prevention of diseases and disorders affecting the lower extremity.

Mr. Chairman, to say that we take our feet for granted probably would be an understatement.

But I suspect that while we may not often think about it, most of us are aware of just how important the foot is to our daily lives, especially if we are encountering problems. A few of us might recall some of those interesting facts we learned back in our high school science class -- about our feet having one-fourth of all the bones in our body, or that each day our feet absorb about half a ton of force.

But what many people do not realize is that foot problems are often the early warning signs of disorders elsewhere in the body, such as heart disease, diabetes, arthritis, and musculoskeletal disorders. Looking at it another way, when a person experiences back pain, for example, there is a good chance that the feet are the source of the problem.

Who is at Risk?

Mr. Chairman, whether the result of a disease, an accident on the job, or a sports-related injury, all of us -- young or old -- are vulnerable to foot ailments.

We know, for example, that as many as ten percent of all children suffer from congenital foot problems that can curtail their activities and hamper their development, both physically and emotionally.

Of course, the fastest growing segment of our population also happens to be the group most at risk. For the elderly, untreated foot problems can hinder their mobility and generally limit their ability to lead independent, productive lives. Sad to say, an estimated 95 percent of the elderly suffer from foot disorders and, according to the National Center for Health Statistics, one-fourth of all nursing home residents cannot walk as a result of foot problems.

According to the Census Bureau, the over-65 population will increase 37 percent over the next 13 years. Within 50 years, the elderly population will double, from ten percent to more than twenty percent of the total population.

Mr. Chairman, unless there is an adequate supply of podiatrists to meet their needs, many of the elderly will be forced to postpone or forgo treatment altogether -- only to require more extensive and more expensive health care in the future.

For them, the rewards that a lifetime of labor deserves will be lost or substantially diminished. What are supposed to be the "golden years" will be tarnished by the pain and anxiety of debilitating foot problems.

How Will We Meet The Challenge?

Mr. Chairman, our colleges of podiatric medicine are striving hard to prepare students for the profession. As a result of our efforts, the number of graduates has steadily increased over the past two decades. In fact, for the period 1976 to 1986 first-year enrollments have increased by 45.7, while over the same period, minority enrollments have increased 224 percent.

Despite this remarkable growth rate, there are still only 9,700 practicing podiatrists in this country -- or about one podiatrist for every 25,000 Americans. And although the number of podiatrists has increased in recent years, the U.S. Public Health Service still characterizes this as "the health profession with the most serious geographic distribution problem."

Of course, this shortage affects virtually all of us, Mr. Chairman. But the hardest-hit are the elderly and those who live in rural communities and inner-cities.

Last year, Mr. Chairman, we appeared before this Subcommittee and asked that you continue to support health professions education and training programs. You did just that, and we are most grateful.

But once again, the President's budget proposes drastic reductions in this area. The Administration has chosen to paint all disciplines with the same broad brush, claiming that there is an oversupply and, therefore, no need to sustain programs such as the HEAL loan program at adequate levels. Instead, the President's budget proposes to cut back funding by two-thirds, denying loans to some 24,000 students. At the same time, the budget proposes to eliminate the only program we have that encourages students to practice in medically underserved areas of this country -- the remote site training grant program.

I would only point out, Mr. Chairman, that by limiting the availability of federal student aid, this budget proposal would undermine a most basic tenet in our society -- allowing every qualified individual an opportunity to pursue the career of their choice. In practical terms, we would be turning back the clock to a time when only the wealthy could afford to pursue careers in the health professions.

To conclude, we again respectfully urge you to provide adequate funding for health professions loans, and to provide $1,000,000 to support continuation of the Remote site training grant program.

Thank you, Mr. Chairman. If there are any questions, I would be pleased to answer them at this time.

STATEMENT OF CHARLES G. HUNTINGTON, AMERICAN ACADEMY OF PHYSICIAN ASSISTANTS

Senator INOUYE. Our next witness represents the American Academy of Physician Assistants, Mr. Charles G. Huntington. Mr. Huntington, welcome, sir.

Mr. HUNTINGTON. Good morning.

Senator Inouye, my name is Charles Huntington. I am a physician assistant from upstate New York. On behalf of the American Academy of Physician Assistants and the Association of Physician Assistant Programs, I want to take this opportunity to thank you for allowing us to testify on the fiscal year 1988 appropriations bill.

As a result of this committee's efforts, thousands of physician assistants [PA] have been able to obtain a quality education at an affordable cost. We appreciate your support.

The administration has once again recommended no funds in the fiscal year 1988 budget for physician assistant education. We strongly recommend that the Congress reject this proposal and appropriate the full amount authorized, that is $4.8 million.

We believe that this amount is the minimum needed to sustain a strong educational program for physician assistants. Elimination of funds would be disastrous for many PA programs, and a reduction in funds could have serious implications for the future of the PA profession.

Virtually every program responding to a recent survey reported that significant changes would occur in their PA program as a result of changes in Federal funding. It was those programs with a special mission that made the most dire predictions.

These programs are almost exclusively focused on training PA's for practice in rural and urban medically underserved areas. In addition, some of these programs are also geared to minority students and their special needs.

For example, the PA program at the Harlem Hospital in New York City has a special mission to train PA's for medically underserved urban communities. Over 85 percent of its graduates have been minority students. The elimination or reduction in Federal funds would mean that the Harlem Hospital Program could not give disadvantaged minority students the additional educational support they need in order to complete the program.

This would eliminate nearly 40 percent of their first year students, and there is a very real possibility this program would close if Federal funds are eliminated altogether.

Another example is the Medex Program at the University of Washington. The University of Washington program covers the five State area of Washington, Alaska, Idaho, Montana, and Oregon. And while it receives some funds from the individual States, it is heavily dependent upon Federal funds for its existence.

Special consideration is given to prospective Medex students who have a sponsoring physician in a medically underserved community. This helps ensure that the graduate will return to the community.

More than 70 percent of the Washington Medex graduates are working in rural communities. The elimination or reduction in Federal funds would result in either closure or serious cutbacks in both of these institutions. More importantly, it would eliminate an important source of health care manpower for urban and rural medically underserved communities.

This brings me to another issue, which is the administration's assertion that due to the physician surplus the Federal Government does not need to be in the business of subsidizing health professions education. While the physician to population ratio would seem to indicate that we do indeed have a physician glut, one would be hard-pressed to convince many communities that this is the case.

Our physician assistant programs are reporting unprecedented demand for their graduates. Contrary to the predicted impact of the glut of physicians on the need for PA's, we have yet to see any negative effect on the demand for PA's.

In fact, we are witnessing the exact opposite—a sharply increasing demand for PA's. For example, within the past 2 months we have had meetings with the Bureau of Prisons and the Public Health Service, and both have sought our advice on how to recruit PA's to fill the vacancies they presently have or anticipate having within the next year.

These vacancies are occurring now because the jobs are not challenging or do not pay well; there are simply not enough PA's to fill all the jobs available.

In addition, as the Federal Government cuts back on graduate medical education and the ability of foreign medical graduates to practice in this country, hospitals are turning to physician assistants to fill the gap. Someone has to care for these patients, and the logical choice that many hospitals are making is to use physician assistants in positions previously held by residents and FMG's.

The PA profession is stronger than ever, but PA's, like other health professionals, are finding it increasingly difficult to sustain a practice in low income communities when they have large school loans to pay off. Federal funds help to defray the cost of education and improve the quality of that education.

PREPARED STATEMENT

While the PA profession stands to lose a great deal from the loss of Federal funds, the true loser in all of this would be the patient, particularly those living in medically underserved communities. We ask that you keep them in mind as you continue with your deliberations on this important issue.

Thank you.

[The statement follows:]

STATEMENT OF CHARLES G. HUNTINGTON

MR. CHAIRMAN, ON BEHALF OF THE AMERICAN ACADEMY OF PHYSICIAN ASSISTANTS AND THE ASSOCIATION OF PHYSICIAN ASSISTANT PROGRAMS, I WANT TO TAKE THIS OPPORTUNITY TO THANK YOU FOR ALLOWING US TO TESTIFY ON THE FY 1988 LABOR-HHS-EDUCATION APPROPRIATIONS BILL.

AS A RESULT OF THIS COMMITTEE'S EFFORTS, THOUSANDS OF PHYSICIAN ASSISTANTS HAVE BEEN ABLE TO OBTAIN A QUALITY EDUCATION AT AN AFFORDABLE COST. WE APPRECIATE YOUR SUPPORT.

AS YOU KNOW, THE ADMINISTRATION HAS ONCE AGAIN RECOMMENDED NO FUNDS IN THE FY 1988 BUDGET FOR PHYSICIAN ASSISTANT EDUCATION. WE STRONGLY RECOMMEND THAT THE CONGRESS REJECT THIS PROPOSAL AND APPROPRIATE THE FULL AMOUNT AUTHORIZED, $4.8 MILLION. WE BELIEVE, MR. CHAIRMAN THAT $4.8 MILLION IS THE MINIMUM AMOUNT NEEDED TO SUSTAIN A STRONG EDUCATIONAL PROGRAM FOR PHYSICIAN ASSISTANTS.

ELIMINATION OF FUNDS WOULD BE DISASTROUS FOR MANY PA PROGRAMS AND A REDUCTION IN FUNDS COULD HAVE SERIOUS IMPLICATIONS FOR THE FUTURE MAKE-UP OF THE PA PROFESSION. I WOULD LIKE TO SHARE WITH YOU THE RESULTS OF A RECENT SURVEY WE CONDUCTED OF PHYSICIAN ASSISTANT PROGRAMS.

WHILE NOT ALL PA PROGRAMS RECEIVE FEDERAL FUNDS, THE VAST MAJORITY RECEIVE SOME FEDERAL MONEY IN SOME FORM OR FASHION. TO VARYING DEGREES THIS MONEY IS USED TO SUSTAIN FACULTY, EXPAND CURRICULUMS, SUPPORT CLINICAL ROTATIONS IN REMOTE PRACTICE SETTINGS OR, IN SOME INSTANCES, SUBSIDIZE DISADVANTAGED MINORITY STUDENTS WISHING TO ATTEND A PHYSICIAN ASSISTANT PROGRAM.

WHILE VIRTUALLY EVERY PROGRAM RESPONDING TO OUR SURVEY REPORTED THAT SIGNIFICANT CHANGES WOULD OCCUR IN THEIR PA PROGRAM AS A RESULT OF CHANGES IN FEDERAL FUNDING, IT WAS THOSE PROGRAMS WITH A 'SPECIAL' MISSION THAT MADE THE MOST DIRE PREDICTIONS.

I WANT TO EMPHASIZE THAT IT IS THOSE PROGRAMS WITH A UNIQUE MISSION THAT WOULD BE MOST ADVERSELY AFFECTED BY A REDUCTION OR ELIMINATION OF FEDERAL FUNDING. THESE PROGRAMS ARE ALMOST EXCLUSIVELY FOCUSED ON

TRAINING PAs FOR PRACTICE IN RURAL AND URBAN MEDICALLY UNDERSERVED AREAS. IN ADDITION, SOME OF THESE PROGRAMS ARE ALSO GEARED TO MINORITY STUDENTS AND THEIR SPECIAL NEEDS. I WOULD LIKE TO FOCUS ON TWO PROGRAMS AS AN EXAMPLE.

THE CITY UNIVERSITY OF NEW YORK PA PROGRAM AT HARLEM HOSPITAL HAS A SPECIAL MISSION TO TRAIN PAs FOR MEDICALLY UNDERSERVED URBAN COMMUNITIES. FURTHERMORE, OVER 85 PERCENT OF ITS GRADUATES HAVE BEEN MINORITY STUDENTS. THE ELIMINATION OR REDUCTION IN FEDERAL FUNDS WOULD MEAN THAT THE HARLEM HOSPITAL PROGRAM COULD NOT GIVE DISADVANTAGED MINORITY STUDENTS THE ADDITIONAL EDUCATIONAL SUPPORT THEY NEED IN ORDER TO COMPLETE THE PROGRAM.

BASED UPON PREVIOUS EXPERIENCE, THIS WOULD ELIMINATE NEARLY 40 PERCENT OF THEIR FIRST YEAR STUDENTS. I WANT TO STRESS, MR. CHAIRMAN, THAT THIS IS THE MINIMUM EFFECT FROM THE LOSS OF FEDERAL FUNDS, THERE IS A VERY REAL POSSIBILITY THIS PROGRAM WOULD CLOSE IF FEDERAL FUNDS ARE ELIMINATED.

ANOTHER EXAMPLE OF A PROGRAM WHICH WOULD BE SEVERELY AFFECTED BY A REDUCTION OR ELIMINATION OF FEDERAL FUNDS IS THE MEDEX PROGRAM AT THE UNIVERSITY OF WASHINGTON SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE. AS YOU KNOW, THE MEDEX IS A SPECIFIC TYPE OF PA TRAINED TO WORK IN MEDICALLY UNDERSERVED COMMUNITIES. THE UNIVERSITY OF WASHINGTON PROGRAM COVERS THE FIVE STATE AREA OF WASHINGTON, ALASKA, IDAHO, MONTANA AND OREGON AND WHILE IT RECEIVES SOME FUNDS FROM THE INDIVIDUAL STATES, IT IS HEAVILY DEPENDENT UPON FEDERAL FUNDS FOR ITS EXISTENCE.

SPECIAL CONSIDERATION IS GIVEN TO PROSPECTIVE MEDEX STUDENTS WHO HAVE A SPONSORING PHYSICIAN IN A MEDICALLY UNDERSERVED COMMUNITY TO ACT AS HIS OR HER PRECEPTOR. THIS HELPS TO ENSURE THAT THE GRADUATE WILL HAVE A STRONG TIE TO THE COMMUNITY UPON GRADUATION. THIS IS A MAJOR REASON WHY MORE THAN 70 PERCENT OF THE WASHINGTON MEDEX GRADUATES, MR. CHAIRMAN, ARE WORKING IN COMMUNITIES OF FEWER THAN 50,000 PEOPLE.

THE ELIMINATION OR REDUCTION IN FEDERAL FUNDS WOULD RESULT IN EITHER CLOSURE OR SERIOUS CUTBACKS IN BOTH OF THESE INSTITUTIONS. MORE

IMPORTANTLY, IT WOULD ELIMINATE AN IMPORTANT SOURCE OF HEALTH CARE MANPOWER FOR URBAN AND RURAL MEDICALLY UNDERSERVED COMMUNITIES.

LEST YOU GET THE IMPRESSION THAT THESE ARE THE ONLY PROGRAMS TRAINING PAs FOR PRACTICE IN SMALL COMMUNITIES, LET ME POINT OUT THAT OUR MOST RECENT SURVEY DATA INDICATES THAT MORE THAN 40 PERCENT OF ALL PAs PRACTICE IN COMMUNITIES OF UNDER 50,000 PEOPLE.

THIS BRINGS ME TO ANOTHER POINT, MR. CHAIRMAN, THE ADMINISTRATION'S ASSERTIONS THAT DUE TO THE "PHYSICIAN SURPLUS", THE FEDERAL GOVERNMENT DOES NOT NEED TO BE IN THE BUSINESS OF SUBSIDIZING HEALTH PROFESSIONS EDUCATION.

WHILE THE PHYSICIAN/POPULATION RATIO WOULD SEEM TO INDICATE THAT WE DO, INDEED, HAVE A PHYSICIAN GLUT, YOU WOULD BE HARD PRESSED TO CONVINCE MANY COMMUNIITES THAT THIS IS THE CASE. OUR PHYSICIAN ASSISTANT PROGRAMS ARE REPORTING UNPRECEDENTED DEMAND FOR THEIR GRADUATES. CONTRARY TO THE PREDICTED IMPACT OF THE "GLUT" OF PHYSICIANS ON THE NEED FOR PAs, MR. CHAIRMAN, WE HAVE YET TO SEE ANY AFFECT ON THE DEMAND FOR PAs.

BY WAY OF EXAMPLE, WITHIN THE PAST TWO MONTHS, WE HAVE HAD MEETINGS WITH THE BUREAU OF PRISONS AND THE PUBLIC HEALTH SERVICE AND BOTH HAVE SOUGHT OUR ADVICE ON HOW TO RECRUIT PAs TO FILL THE VACANCIES THEY PRESENTLY HAVE OR ANTICIPATE HAVING WITHIN THE NEXT YEAR.

THESE VACANCIES ARE OCCURRING, NOT BECAUSE THE JOBS ARE NOT CHALLENGING OR DO NOT PAY WELL. THE FACT OF THE MATTER IS, MR. CHAIRMAN, THAT THERE SIMPLY ARE NOT ENOUGH PAs TO FILL ALL OF THE JOBS AVAILABLE.

IN ADDITION, AS THE FEDERAL GOVERNMENT CUTS BACK ON GRADUATE MEDICAL EDUCATION AND THE ABILITY OF FOREIGN MEDICAL GRADUATES (FMGs) TO PRACTICE IN THIS COUNTRY, HOSPITALS ARE TURNING TO PHYSICIAN ASSISTANTS TO FILL THE GAP. SOMEONE HAS TO CARE FOR THESE PATIENTS AND THE LOGICAL CHOICE MANY ARE MAKING IS TO USE A PHYSICIAN ASSISTANT IN POSITIONS PREVIOUSLY HELD BY RESIDENTS AND FMGs.

THERE IS NO QUESTION THAT THE HEALTH CARE SYSTEM IS IN A SERIOUS STATE OF FLUX. THE FACT IS, NO ONE IS REALLY SURE WHAT THE LONG RANGE IMPLICATIONS OF THESE CHANGES WILL BE. BUT WE ASK YOU TO LOOK BEHIND THE NUMBERS AND SEE HOW HEALTH CARE IS BEING PROVIDED IN AMERICA. IT'S A DIFFERENT LANDSCAPE THAN WAS THERE EVEN AS RECENTLY AS FIVE YEARS AGO.

MR. CHAIRMAN, AS WE HAVE STATED IN THE PAST, THE PHYSICIAN ASSISTANT PROFESSION WILL NOT DISAPPEAR IF FEDERAL FUNDS ARE ELIMINATED. SOME PROGRAMS WILL CEASE TO EXIST AND OTHERS WILL HAVE TO RAISE TUITION OR SEVERELY CURTAIL OTHER ESSENTIAL ACTIVITIES. BUT DESPITE THE LIMITED AVAILABILITY OF FEDERAL FUNDS, SEVERAL UNIVERSITIES HAVE EXPRESSED AN INTEREST IN BEGINNING A PA PROGRAM WITHIN THE NEXT TWO YEARS.

NO, MR. CHAIRMAN, THE PA PROFESSION IS STRONGER THAN EVER. BUT PAs, LIKE OTHER HEALTH PROFESSIONALS, ARE FINDING IT INCREASINGLY DIFFICULT TO SUSTAIN A PRACTICE IN LOW-INCOME COMMUNITIES WHEN THEY HAVE LARGE SCHOOL LOANS TO PAY OFF. FEDERAL FUNDS HELP TO DEFRAY THE COST OF EDUCATION AND IMPROVE THE QUALITY OF THAT EDUCATION.

WHILE THE PA PROFESSION STANDS TO LOSE A GREAT DEAL FROM THE LOSS OF FEDERAL FUNDS, THE TRUE LOSER IN ALL OF THIS, MR. CHAIRMAN, WOULD BE THE PATIENT, PARTICULARLY THOSE LIVING IN MEDICALLY UNDERSERVED COMMUNITIES. WE ASK THAT YOU KEEP THEM IN MIND AS YOU CONTINUE WITH YOUR DELIBERATIONS ON THIS MOST IMPORTANT ISSUE.

Senator INOUYE. I am authorized to assure you that the $4.8 million that was cut out by the administration will be restored.

Mr. HUNTINGTON. Thank you.

Senator INOUYE. What is the academic requirement for one to be certified as a physician assistant?

Mr. HUNTINGTON. All programs require at least 2 years of previous college, mostly concentrating on science, although most applicants already have a bachelor's degree or receive them upon completion of training.

Also required is several years of patient care experience.

Senator INOUYE. So there is a minimum of 2 years college?

Mr. HUNTINGTON. Yes; and the programs are generally 24 straight months.

Senator INOUYE. That is six semesters?

Mr. HUNTINGTON. Yes.

Senator INOUYE. What is the average pay that physician assistants receive?

Mr. HUNTINGTON. Currently it is between $25,000 and $30,000.

Senator INOUYE. That would make you slightly higher than nurses?

Mr. HUNTINGTON. Yes, sir.

Senator INOUYE. What percentage of PA's are male?

Mr. HUNTINGTON. Right now it is about 60 percent male, 40 percent female, although the programs are composed of a majority of female. So it has rapidly become equally split between male and female.

Senator INOUYE. Well, I thank you very much, sir. We will do our best to support your program.

Mr. HUNTINGTON. Thank you.

STATEMENT OF GEORGE J. CARANASOS, M.D., UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, SOCIETY FOR RESEARCH AND EDUCATION IN PRIMARY CARE INTERNAL MEDICINE

Senator INOUYE. Our next witness is from the University of Florida College of Medicine, representing the Society for Research and Education in Primary Care Internal Medicine, Dr. George J. Caranasos.

Dr. CARANASOS. Thank you.

Senator INOUYE. You are a patient man, sir, waiting this long.

Dr. CARANASOS. Patience is a virtue among physicians, or anybody else, I guess.

Senator Inouye, my name is George Caranasos. I am a professor of medicine at the University of Florida College of Medicine, and the chief of the division of general internal medicine, which houses the Primary Care Training Program in general medicine.

In addition, I am in charge of the section on geriatrics. I am testifying on behalf of the Society of General Internal Medicine, which is the new shortened name of the Society for Research and Education in Primary Care Internal Medicine, adopted 3 days ago.

The society's major purpose is to promote the training of physicians in primary care general internal medicine, which is first contact, continuing, comprehensive medical care. Most of our 1,700 members serve on medical school faculties, teaching residents in general internal medicine programs. Accordingly, the Society of General Internal Medicine is especially interested in the appropriation for training grants in general internal medicine and general pediatrics. I will confine my remarks to this aspect of the budget.

Last year Congress appropriated $18.5 million for training grants in general internal medicine and general pediatrics, which helped support 88 primary care training programs. Over the years, these programs have had a major impact on the training and career choices of young physicians.

These training grants support a new kind of residency training which prepares young physicians to deliver high quality, cost effective primary care. Let me briefly describe how general internal medicine training differs from traditional internal medicine training.

The general internal medicine programs have 25 percent of their training take place in ambulatory or clinical settings. These programs emphasize continuity of care, comprehensive care, and training to manage the vast majority of problems encountered in ambulatory adult patients without referrals to subspecialists.

Residents are taught the principles of health maintenance or preventive medicine, which is keeping your cholesterol in the normal range and having a good blood pressure. Training emphasizes cost effective approaches to health care. And most importantly, residents learn that a career in primary care is intellectually and personally rewarding and satisfying.

These training grants have also been a major stimulus to the development of academic divisions of general medicine. In 1984, a study by the Society of General Internal Medicine shows that there are 145 divisions of general internal medicine in American medical schools.

The faculty of these divisions play a critical role in their medical schools. They spend about one-half their time in direct patient care, usually in hospital-based clinics. Their presence has led to improvements in both the quality and efficiency of services.

They spend about one-third of their time teaching, and studies show that residents use hospital resources more efficiently when they are supervised by general internal medicine faculty, rather than subspecialists.

General internal medicine faculty serve as important models for medical students, interns, and residents, and thus serve to influence career choices.

The development of general internal medicine residency programs and faculty divisions of general internal medicine would not have been possible without Federal support. The impact of these grants is further demonstrated in a recent study of career choices of pediatricians and internists graduating from primary care residency programs supported by the Health Manpower Act.

The study shows that greater than 85 percent enter primary care practice. In contrast, at most one-third of graduates of traditional internal medicine programs enter primary care.

This outcome of Federal support is crucial. While currently 35 percent of physicians are in primary care practice, a recent study by the Institute of Medicine recommends that 50 percent of physicians should be in primary care practice.

In addition, a recent survey shows that one-third of residents planning on a general internal medicine practice intend to practice in towns of less than 50,000 population, while only 9 percent of subspecialists plan to do so. Clearly, generalists are more likely to make an impact on physician maldistribution than are subspecialists.

Importantly, the practice time of general internists is appreciably devoted to caring for old persons. Thus, the primary care general internist plays a vital role in providing care for our expanding elderly population.

The small amount of Federal support which has enabled these primary care training programs to develop is an excellent investment in the future of America's health care. These programs are training the types of federals needed throughout the country.

PREPARED STATEMENT

For this reason, we are requesting continuation of the $18.5 million in support of primary care training and general medicine and general pediatrics.

Thank you.

[The statement follows:]

STATEMENT OF GEORGE J. CARANASOS

Mr. Chairman, my name is George Caranasos. I am a Professor of Medicine at the University of Florida, College of Medicine and the Director of the Division of General Medicine which houses a Primary Care Training Program in General Internal Medicine. In addition, I am the Chief of the Section on Geriatrics. I am testifying on behalf of SREPCIM (the Society for Research and Education in Primare Care Internal Medicine).

SREPCIM was founded in 1978 as an affiliate of the American College of Physicians. Its major purpose is to promote the training of physicians in primary care or general internal medicine: i.e., first contact, continuing, comprehensive medical care. Most of our members, who now number over 1700, serve on medical school faculties, and are involved in the teaching of residents in general internal medicine. Accordingly, SREPCIM is especially interested in the appropriation for training grants in general internal medicine and general pediatrics. I will confine my remarks today primarily to this aspect of the HHS budget.

Last year, Congress appropriated $18.5 million for training grants in general internal medicine and general pediatrics. Over the years, these appropriations for primary care training programs have had a profound effect on the training of physicians in America.

The current 88 Primary Care Training Programs in General Internal Medicine and General Pediatrics are located mostly in the nation's major teaching hospitals, which train 81% of the country's resident physicians. Therefore, Primary Care Training Programs are strategically located to have a major impact on the training and development of young physicians.

The central purpose of the training grants in general internal medicin and general pediatrics is the support of a new kind of residency training which prepares young physicians to deliver high quality, cost-effective primary care. Let me describe briefly the content of residency training in general internal medicine.

General internal medicine training differs from traditional internal medicine training in several important ways:

(1) More teaching occurs in an ambulatory (or clinic) setting. In a

traditional internal medicine residency, about 10% of a resident's experience is in an ambulatory setting, while in general internal medicine programs supported by federal training grants, more than 25% of training takes place in such settings.

(2) General internal medicine programs emphasize continuity of care and comprehensive care. Residents in these programs acquire skills in areas such as psychiatry, orthopedics, and gynecology, areas which are not part of traditional internal medicine training. Thus, they are able to manage the vast majority of problems encountered in ambulatory adult patients without referrals to subspecialists.

(3) Residents are taught principles of health maintenance. They work with other health professionals, including nutritionists, and nurse practitioners, to counsel patients regarding diet, exercise, and other health-related behaviors. Thus, general internal medicine residents are able to help patients stay healthy as well as treat them when they are ill.

(4) General internal medicine training emphasizes cost-effective approaches to health care. Residents learn when to use laboratory tests and technological procedures as well as when not to use them. They also learn that many medical problems can be managed on an ambulatory basis, avoiding the need for expensive hospitalization.

(5) Perhaps most important, residents in these programs learn through experience and example that a career in primary care can be intellectually and personally rewarding -- and they stay with it. A recent SREPCIM survey of selected training programs shows that about 80% of residents trained in these programs choose careers in primary care. In contrast, only a third of the graduates of traditional internal medicine programs choose such careers.

While the principal purpose of the training grants has been to support the education of general internal medicine residents, they have had other desirable effects. They have been a major stimulus to the development of Divisions of General Internal Medicine throughout the United States. A 1984 SREPCIM study shows that there are now 145 Divisions or Sections of General Internal Medicine in U.S. medical schools. The faculty who staff these divisions play a critical role within their hospitals and medical schools:

(1) Faculty in divisions of general internal medicine spend almost half their time in direct patient care, usually in hospital-based clinics or group practices. These clinics are an important source of ambulatory care, especially for the poor and elderly. The presence of full-time faculty in such clinics has led to improvements in both the quality and efficiency of services.

(2) Faculty in divisions of general internal medicine spend about a third of their time teaching in ambulatory and inpatient settings. They supervise residents in traditional internal medicine programs as well as those in primary care. General medicine faculty train residents in health promotion and disease prevention, as well as in cost-effective approaches to health care. Studies show that residents use hospital resources more efficiently when they are supervised by faculty in general internal medicine than when they are supervised by subspecialists.

(3) General internal medicine faculty serve as important role models for medical students, interns, and residents. Research indicates that medical school faculty have a significant influence on the career choice of physicians in training. The dominant role model on most medical school faculties is the subspecialist. The academic general internist offers trainees, including those in traditional internal medicine programs, an alternative.

The development of general internal medicine residency programs and faculty divisions of general internal medicine would not have been possible without federal grant support. Our current practices of paying physicians and hospitals encourage the development of faculties dominated by subspecialists and residency training programs focused on technology-intensive inpatient services. By explicitly funding ambulatory care teaching, the residency training grants have provided departments of medicine with an incentive to add to their ranks faculty interested in general medicine and residents whose training includes substantial ambulatory care.

The career choices of pediatricians and internists graduating from primary care residency programs have been studied carefully. National surveys have recently been completed which indicate that greater than 85% of all pediatric residents in primary care training programs supported by the Health Manpower Training Act are entering primary care practices, while 87% of graduates of primary care general internal medicine programs also are entering primary care practices. This outcome of federal support is extremely important. Projections have been made regarding the nation's need for primary care physicians in the year 2000. Currently, 35% of physicians are in primary care practice. A recent study by the Insitute of Medicine recommends that 50% of physicians should be in primary care practice. Unfortunately, particularly in the field of internal medicine at present, there is a disproportionate number of subspecialists being trained.

In addition, a recent study of internal medicine residents shows that a third of residents planning on a general internal medicine practice intended to practice in towns of less than 50,000 population while only 9% of subspecialists plan to do so. Clearly, generalists are more likely to make an impact on physician maldistribution than are subspecialists.

Importantly, general internists are the primary source of medical care for the elderly. The bulk of practice time of general internists is involved with caring for older persons with multiple medical problems. Thus, the primary care general internist plays a vital role in providing comprehensive care for our expanding elderly population. The general internist is, and will remain, the cornerstone of medical care to the nations 25 million elderly.

The very small amount of federal support which has enabled these primary care training programs to develop is an excellent investment in the future of America's health care. These programs are training the types of physicians which are needed throughout the country. For that reason, we are requesting continuation of the $18.5 million in support of primary care training in general internal medicine and general pediatrics.

Senator INOUYE. Doctor, I am pleased to tell you that I am authorized by the chairman of this committee, Senator Chiles, that he will be recommending the full restoration of the $18.5 million. And when he recommends, we will follow. So you will get the full amount.

What is the big difference between general internal medicine and family medicine?

Dr. CARANASOS. There are three primary care specialties: family medicine, general internal medicine, and general pediatrics. Family medicine is the broadest, in the sense it takes care of the most problems.

The difference between general pediatrics and general internal medicine and family medicine is perhaps one of depth. The pediatrician and the internist are trained to take care of more serious problems, more complex problems, and particularly in internal medicine and especially in elderly people, multiple interacting problems.

But all of them provide first care, continuing care to patients. And this has been a most enlightening morning. You have had testimony from a variety of groups which I think punctuates the fact that when you deal with the health care system you have complex interacting groups. You cannot separate one from the other.

There should not be attempts made to differentiate between, in a sense, family practice, pediatrics, general internal medicine, many of the other areas that impinge on it. Dr. Fournier, who was here with the AHEC, is in charge of a General Internal Medicine Training Program at the University of Miami.

Dr. Thames, who was here with Dr. Taylor, in family practice is a well known practitioner in Florida. His son last year completed his training at the University of Florida and is a primary care general internist.

The podiatrist that was just here exemplifies the importance of that field. And what I do is also train geriatricians. We have an educational program in podiatry for our geriatricians.

The physicians assistant is important. We started one of the first programs for physicians assistants at the University of Florida, and I actually have an honorary physicians assistant degree for teaching in it.

They all interact. They all provide primary care for patients, and that is what we are really interested in.

Senator INOUYE. Is there any justification for a higher reimbursement rate for a doctor specializing in general internal medicine as contrasted to a family physician?

Dr. CARANASOS. The issue, the problem there is reimbursement for cognitive skills versus procedural skills. And the same thing occurs in internal medicine as occurs with family practitioners. The internal medicine, general internists, are reimbursed at a lower rate for doing the same things that internal medicine subspecialists do.

And the real issue is addressing appropriate reimbursement for cognitive skills as opposed to procedural skills. And I think it has to be looked at broadly and very carefully, and I think physicians should be reimbursed appropriately for what they do.

I do not think we should—I think we should be constructive in approaching this, rather than adversarial.

Senator INOUYE. One of your specialties interests me greatly, and that is geriatrics. The segment that is growing the fastest would be the senior citizens in the United States, and yet, if my recollection is correct, less than one-tenth of 1 percent of all the physicians in the United States have received any training in geriatrics.

Is that correct?

Dr. CARANASOS. I cannot corroborate the figures, but I can certainly say that the training that physicians have received in geriatrics has been totally inadequate. As a matter of fact, the General Internal Medicine Training Program that we have, which has been in existence for 9 years, since its inception has had training in geriatrics for all of our residents.

As a matter of fact, we were mentioned in the Institute of Medicine report on geriatric training at medical schools.

Senator INOUYE. What can we do to counter this problem?

Dr. CARANASOS. In part, it is being countered from within medicine itself. I think there is much more appreciation and enlightenment as to the importance of geriatric training.

I also think the Federal Government can assist this enlightenment by providing for programs that will expand and improve geriatric education in medical schools. We have programs for our students. Our general medicine program has education for our residents, which has spilled over into our traditional program, and we also have a fellowship program.

Now, Florida is uniquely situated, as you are well aware. We have the largest percentage of elderly people in the Nation; 17.8 percent of Florida's population is over the age of 65.

The next largest percentage is in Arkansas, as a matter of fact. I think that is 14.3 percent. Then it progressively falls after that in other States.

But the recognition is there, and I do think that Congress could help by assisting in supporting educational programs and training programs.

Senator INOUYE. Could you submit a recommendation for such a program?

Dr. CARANASOS. Oh, I would be happy to.

Senator INOUYE. Well, I thank you very much. It has been most interesting. Thank you very much, sir.

Dr. CARANASOS. Thank you very much.

STATEMENT OF BETSEY STONE, EXECUTIVE DIRECTOR, TRI-COUNTY COMMUNITY MEDICAL CENTER, GREENVILLE, FL, NATIONAL ASSOCIATION OF COMMUNITY HEALTH CENTERS, INC.

Senator INOUYE. We come to the best part. Our next witness, final witness and the best witness, is from the Tri-County Community Medical Center in Greenville, FL, representing the National Association of Community Health Centers, Inc., Ms. Betsey Stone, the executive director.

Ms. STONE. Thank you, Mr. Chairman and members of the subcommittee. I appreciate an opportunity to testify this morning.

I figure that you folks knew I was from a rural area and I needed a nice quiet open space to be able to talk.

As you know, the National Association of Community Health Centers represents over 600 migrant and community health centers. What we are, are private, not for profit, community based organizations that are governed by local people in the community.

We have prepared a written testimony which has been submitted, so I would like to just take a few minutes of your time to try to make the written testimony, the numbers, reflect some real rural and urban needs.

In doing so, I would like to tell you a little history of Tri-County Community Medical Center. It is part of the other Florida, the panhandle of north Florida, where many people may not even realize we exist.

We were started by a group of low income black women who were caring for the elderly poor in their rural communities. These elderly poor lived on winding, dusty, red clay roads, sometimes as far as 30 to 60 to 100 miles from the nearest doctor, and certainly at least that far from the nearest hospital.

These were people who did not have care in their homes. These women met with other people in the community, people from the women's, infants, childrens programs, local business people, and others, to form a community health center. Although we were originally targeted around the elderly, the rate for black infant mortality in some of our counties was astronomical.

When we started, it was 53.6 per 1,000. That was the highest, and the lowest was about 36 per 1,000. That is more than triple the State rate in Florida, which, thanks a lot to the senior Senator from Florida and from Dr. Charles Mahon, has decreased that rate. But at our time of start, which was only several years ago, we were more than triple the State rate.

In the area——

Senator INOUYE. What is it now?

Ms. STONE. It has decreased, but we have such small yearly statistics, our numbers are so small, I would not want to claim that we have reduced the infant mortality rate. However, we have, we believe, in one of our counties where we are based and have made the most impact. The 1985 statistics showed the low birth weight cut in half in this community, and that is certainly the first indicator.

Our OB Program did not begin until late 1984, and so our statistics, like some of the others presented, are coming in a little bit later.

In the area, no private physicians accepted Medicare or Medicaid. They demanded cash even for the Medicare card. Medicaid was known as the drug card. There were people in the community that did not even know that Medicaid was good for anything except for use in a pharmacy.

The local rural hospital was essentially strangled. There was no OB Program that existed at the time of our entry into the program. Several hard-working physicians, some of them through the National Health Service Corps, had been burned out and moved on to more lucrative surroundings.

Into this, we received one of the last new fundings for rural health centers, and in 1983 began a program with section 330 funds in the small town of Greenville. That happens to be Ray Charles' birthplace. I am not sure that the area has improved much from the days that he had the difficulties there.

We started a program with all Federal funding and began. In our first year, we were 75 percent Federally funded. Within our fourth year, we are now only 25 percent federally funded.

We have operated efficiently. We have leveraged state resources. We have utilized Medicare and Medicaid. We have provided an option for those without a family physician who come to us because we are the facility in the area. And we have been able to come up with a solid base with that help.

We recruited for an entire year for a family physician to come to our area. We were fortunate in finding—we were not fortunate in finding a private family physician, but we found a nurse practitioner and a certified nurse midwife and a local private physician, a general surgeon, who was willing to start them in some very basic services.

After 1½ years, we received our first National Health Service Corps physician. We now have four, but we have no other private physicians, physicians recruited through the private market.

One of the horrible things that is now occurring within the U.S. Public Health Service, as we speak to you from the areas that have not experienced the glut, is that the Public Health Service, with their few number of National Health Service Corps doctors remaining, are having to make very hard decisions, and I would like to share one of those with you.

They make decisions now with the few number of obstetricians available. We have a program which has a single obstetrician, five certified nurse-midwives. Our obstetrician has shared call with the general surgeon who originally started us.

His malpractice has increased from $20,000 to $65,000 this year. He will no longer be able to give her backup rotation. She is now pregnant. She only takes 3 days a month off as it is.

We were slotted for an additional obstetrician come this July, but because of the crying shortage and the crises in other areas that position had to move from us to another area where in fact the program had already broken.

So what is occurring within our Government and within our health centers now is that we are having to stop our preventive medicine. In our case, the second OB would be preventive medicine. We would be able to maintain our person who is there and hopefully maintain it for the future.

But we understand that there is a crisis and it is necessary to have to move obstetricians from some areas to places where huge caseloads are left with no one to deliver them.

In addition, we want to say to you, we appreciate your comments on the issue of preventive medicine; that you have created a capacity, a system with a strong capacity to leverage local resources and to pull in a large number of needy patients who had no other resources.

We ask you to continue to build on that capacity. There are facilities which are cited, I think some over 300, that do not even meet fire codes. For my own community, I can say we are inan 1860's wooden building that has not been failed in the fire code only because our community does not have a fire code.

And we would ask you to look for the future and continue the funding for the community health centers, for the National Health Service Corps, the initiatives that are surrounding them, the maternal and child health and the homeless, for the poorest of the poor.

PREPARED STATEMENT

We believe that we are an effective, efficient way to do business, and believe we are prepared to carry out your concerns.

Thank you.

[The statement follows:]

STATEMENT OF BETSEY STONE

My name is Betsey Stone, Executive Director of the Tri-County Community Medical Center based in Greenville, Florida, with 4 clinic sites serving Northern Florida. I am speaking on behalf of the National Association of Community Health Centers which represents over 600 Community and Migrant Health Centers throughout our Nation. As you know, these centers provide basic health care to America's poorest, most disadvantaged people from inner-city ghettos to rural migrant farmworker labor camps and isolated, resource-poor communities.

I deeply appreciate the opportunity to discuss with you today the problems which these health centers face in the current economic climate, and the issues of fiscal 1988 funding for the federal programs which support the health center activities.

Overview of Health Centers

Health centers are primary care facilities which provide out-patient medical and health services to over 6 million low-income and disadvantaged patients each year, most of whom have no other available source of health care. These include medically (and, often, economically) indigent persons who lack public or private coverage -- including significant numbers of high-risk pregnant women and children and homeless persons -- as well as Medicare and Medicaid recipients refused care by other private providers (often because of low payment rates or discriminatory practices). In many rural communities, these centers are the only available health care providers for miles.

Despite these difficulties and the generally poor health of their patients, the primary care centers have been effective health care providers, according to findings in an overwhelming majority of independent studies over the past two decades.

o They are responsive to their communities - centers receive a high degree of acceptance and utilization in communities they serve.

- o They have been effective in persuading poor families to end their reliance on expensive and less appropriate hospital emergency rooms, and to make use of preventive health services and habits. Health center users receive more prenatal care, and show significantly higher immunization and pap smear rates than comparable residents who do not use health centers.

- o They have significantly improved the health of the communities they serve. Major reductions in infant mortality - as much as 40 percent - have been achieved in areas served by health centers, because of the access they provide to high quality maternity and infant care services. Health centers alone have been found to account for 12 percent of the decline in mortality rates among black infants that occurred in the United States between 1970 and 1978.

Health centers have been found to be particularly good at completeness of care, clinical management of patients, follow-up and overall patient care. The health centers represent one of America's most important public health programs for women, infants and children. Over one-third of all health center patients are children under age 14, and over one quarter of all patients are women of childbearing age.

By encouraging the appropriate use of health care, health centers have increased access to care without encouraging overuse. Health centers dramatically reduce hospital use and costs for patients. In fact, the health centers' impact on hospitalization costs means that they have more than paid for themselves.

The need to strengthen the capacity of health centers has grown more urgent in recent years, as the number of families living in poverty and without health insurance has grown and the number of elderly Americans unable to afford the high cost of medical care has increased. For millions of our most vulnerable citizens, health centers are increasingly their only source of health care. A recent study indicates that in 1985 there were approximately 37 million people without health insurance, a 42 percent (11 million) increase since 1979. Nearly one-third of the uninsured were members of families with below-poverty incomes, while another third were in families with incomes between 100 and 200 percent of poverty. It should be noted that the overwhelming majority of these individuals are workers or their dependents. This drastically sharp increase in the number of medically indigent persons over a very few years has placed more of a demand on health centers for health care to the indigent.

RECOMMENDATIONS

I. Community Health Centers - $427.0 million

This amount would continue current funding, allowing health centers to serve approximately 5.7 million persons in fiscal 1988. It would also allow for the funding of the Congressional infant mortality (or child health) initiative development of additional health centers in the neediest unserved or underserved communities; and for provision of enhanced health care services to high-risk pregnant women and children, with a special emphasis on case management and coordinated perinatal care services. Through this initiative, health centers will serve an additional 200,000 persons next year.

II. Migrant Health - $48.4 million

This amount would continue current funding, which serves 550,000 farmworkers and their family members, about 16 percent of this high-risk population. It would also provide $3 million to serve high-risk pregnant women and children, under the infant mortality (or child health) initiative.

III. Facility Repair Grants - $15.0 million

There is $5 million currently available for essential repairs at health centers with a priority for those which are in imminent violation of building and life safety codes. This amount is miniscule in comparison to the number of buildings which are in violation. We are requesting an additional $10 million because the need to repair these violations is staggering. More than 300 applications have been received from health centers which are in violation and which are seeking a total of nearly $25 million, more than five times the amount currently available.

IV. National Health Service Corps (Field Placement)-$65.0 million

This amount, which is an increase of $5 million over the FY 87 appropriation, would provide funding for the projected NHSC federally-salaried placements and would also cover the cost of all projected private placement (PP) assignments at community and migrant health centers. As you know, the NHSC is the single major supply source of clinical manpower for health centers in needy areas. Currently nearly two-thirds of the physicians and dentists working at C/MHCs are NHSC assignees; the vast majority of these are Scholarship recipients providing their obligated service. Without the NHSC, recruitment of clinical personnel in the neediest areas (isolated rural communities or economically depressed urban areas) would be difficult, if not impossible.

Through the assistance of the NHSC, the number of C/MHC sites grew from 1,200 to 1,500 between 1983 and 1987, and the number of patients served grew from 5.1 million to 6.2 million.

I might note that health centers have borne a significant share of the costs associated with their NHSC assignees. If these individuals had been placed under federal employment, the additional costs to the NHSC program would exceed $80 million this year alone.

V. NHSC Scholarship Program - $3.5 million

We wish to strongly recommend continued funding for the Scholarship program, which has been drastically cut back over the past few years. As you know, the Scholarship program has assisted students who would likely never qualify for commercial - or even governmental - loans. Many NHSC Scholarships go to students who first entered medical and dental training under the Exceptional Financial Need program, which targets disadvantaged and minority students. In fact, the recent notable decline in minority and low-income medical school enrollment can be tied directly to cuts in the NHSC Scholarship program. Our recommended funding level would support 150 Scholarships in FY88.

VI. NHSC Loan Repayment Program - $15.0 million

As noted, the Scholarship program has been severely reduced since 1982. In order to compensate for the resulting cutback in the number of service-obligated health professionals, legislation has been proposed in the House, and will soon be introduced in the Senate, to create a new Loan Repayment program, which would permit payment of the cost of educational loans obtained by health professions students in return for service in a designated HMSA. As proposed, the NHSC would repay up to $20,000 per year in loans secured for tuition and education expenses in return for each year of service, with a minimum of 2 years required.

The Loan Repayment program is desperately needed because:

o It would provide an immediate supply source for C/MHC and others in shortage areas; unlike the Scholarship program, the Loan Repayment program could seek applications from students who have already completed, or are near the completion of, their training - thus there would be no lag time in making these individuals available for service.

- It would provide greater assurance that the recipients will complete their service obligation: Because it would attract applicants who are near to or at completion of their training, the likelihood of "defaults" (caused mainly by significant changes in personal circumstances over the education/training period) would be dramatically reduced.

Our recommendation would allow 250 individuals to participate in the Loan Repayment Program. Loans would be repaid over a three year service period providing stability for these individuals and our centers.

VII. Other Efforts

Mr. Chairman, we also wish to recommend:

- Full funding of the Maternal and Child Health program at its FY88 authorization level of $557 million, to permit expanded services to high-risk women and children.

- Full funding for Health Care Services to Homeless Persons, including funding for FY88 efforts, to the extent they are authorized.

Mr. Chairman, thank you for this opportunity to provide this information to you and the Subcommittee. I would be glad to answer any questions.

Senator INOUYE. Thank you.

This fiscal year we have appropriated $400 million for the Community Health Center Program. We are prepared to equal that in this fiscal year, this coming fiscal year. However, the chairman of this committee, Senator Lawton Chiles, is presently in heavy consultation with the chairman of the authorizing committee, and I believe the authorizing committee will come up with an increase in this area. And he has advised us here that he will be recommending the authorized number.

So very likely it will be far in excess of $400 million. So you have got a good Senator in Florida. He looks after you folks.

Ms. STONE. Thank you very much.

Senator INOUYE. And tell Ray Charles we will take care of his town.

Ms. STONE. Thank you.

Senator INOUYE. Thank you very much.

PREPARED STATEMENT OF LARRY S. JORDAN

We have the statement submitted by Mr. Larry S. Jordan, and it will be made part of the record.

[The statement follows:]

STATEMENT OF LARRY S. JORDAN, PRESIDENT, NATIONAL ASSOCIATION OF STATE EMERGENCY MEDICAL SERVICES DIRECTORS

Mr. Chairman, and members of the committee, my name is Larry Jordan and I am the president of the National Association of State Emergency Medical Services Directors. I am also the director of Florida's emergency medical services program.

The National Association of State Emergency Medical Services Directors is comprised of the emergency medical services director of each state, the District of Columbia, and the U.S. territories. Our association is organizationally affiliated with and administratively headquartered at the Council of State Governments in Lexington, Kentucky. At the state level, the vast majority of our members are organizationally a part of state health offices.

Emergency medical services -- most commonly referred to as EMS -- is truly a national issue. Our lives literally depend on EMS wherever we go.

EMS, as we know it today, had its beginnings in the early 1970s following the landmark 1966 National Research Council publication, Accidental Death and Disability: The Neglected Disease of Modern Society. This publication attacked the paucity of adequate medical care for injury victims and highlighted the magnitude of the injury problem that then represented the leading cause of death among persons between the ages of 1 and 37. Congress responded to this problem by passing an EMS act that resulted in the modern EMS systems that exist in many areas of the country today.

Unfortunately, sophisticated emergency care is largely restricted to urban areas and even then is of widely varying quality. Thousands upon thousands of Americans will unnecessarily suffer permanent disability and death as a result of deficiencies in both quality and coverage of EMS throughout the nation.

Contrary to popular belief, neither cancer nor heart disease is the leading cause of death in the United States...it is trauma injury and the statistics are grim. Recently, the National Research Council characterized trauma injury as "the principal public health problem in America today." Trauma injuries kill more Americans aged 1 to 34 than all diseases combined, and they are the leading cause of death up to age of 44.

Trauma injuries are responsible for more lost years of life than cancer and heart disease combined; more inpatient hospital days per year than heart disease, and four times as many as cancer; and today, direct and indirect costs to our society are running over $90 billion a year, making trauma the most expensive, yet most preventable health problem.

EMS has an obviously critical role in alleviating this problem, but it will need your continued help if we are to make progress in reducing unnecessary disability and deaths. The General Accounting Office, in a 1986 report to Congress, determined that subsequent to the original block grant legislation states had assumed from the federal government the leadership role in financing and regulating the local delivery of emergency medical services. However, the report notes that much remains to be done particularly in extending sophisticated emergency medical services to rural areas and providing quality trauma care throughout the nation.

Mr. Chairman, we would urge that your committee assist us in this effort by fully funding the Preventive Health and Health Services block grant at its authorized level. This would allow states the option of restoring some of the funds that have been previously cut from their EMS programs. Many states still have critical unmet EMS program needs which could be addressed if additional block grant funds were made available.

We recognize and are sensitive to the dollar constraints that you face, but we also recognize the substantial economic and humanitarian dividends that can be realized through full support of state EMS programs. In Florida alone, trauma injuries are costing us approximately $1.5 billion in economic loss annually, an average of about 13,000 severely injured persons each year, about 6,000 unnecessary permanent disabilities each year, and 3,000 unnecessary deaths.

Over 20 years ago, the National Research Council reported on American's emergency medical care problems and termed them "the neglected disease of modern society." Almost 20 years later, in 1985, the National Research Council again reported on these problems and characterized them as "the principal public health problem in America today." I hope that 20 years from now the National Research Council does not produce yet a third report telling us that unnecessary death and disability due to trauma injuries remains at the unacceptably high level that they are today.

We know that your committee can help us make a difference by supporting our efforts through the full funding of the

Preventive Health and Health Services block grant authorization.

Mr. Chairman, thank you for the opportunity of allowing me to appear before your committee on this most truly life and death matter.

SUBCOMMITTEE RECESS

Senator INOUYE. The subcommittee will now stand in recess until 9:30 a.m. tomorrow, when we will continue with our public witness hearings.

[Whereupon, at 12:32 p.m., Monday, May 4, the subcommittee was recessed, to reconvene at 9:30 a.m., Tuesday, May 5.]

DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

TUESDAY, MAY 5, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:35 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Lawton Chiles (chairman) presiding.

Present: Senators Chiles, Harkin, Weicker, Hatfield, and Domenici.

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator CHILES. This morning the subcommittee will continue its public witness hearings with testimony focusing on programs of the Department of Health and Human Services.

This week the subcommittee is going to hear testimony from over 200 witnesses, and because of the large number of witnesses we must request that each witness keep their oral testimony brief. Your full statements will be included in the record. Help us stay on schedule.

We use a little lighting system up here, and when the red light goes on your 3 minutes have expired. We need to do this really so that each witness will have a fair and equal opportunity.

The situation reminds me a little of the advice that Joseph Pulitzer offered to editorial writers and columnists and reporters. Pulitzer said, put it before them briefly so that they will read it clearly, so that they will appreciate it picturesquely, so they will remember it, and above all accurately, so that they will be guided by its light.

Our first witness is going to be Marcellus Grace, representing Tuskegee University School of Veterinary Medicine. Dr. Grace?

STATEMENT OF DR. HENRY LEWIS, ASSOCIATE DEAN, FLORIDA A&M UNIVERSITY, COLLEGE OF PHARMACY, TALLAHASSEE, FL

Dr. GRACE. Good morning, Senator.

Senator CHILES. Coming up with him will be Dr. Henry Lewis with the Association of Minority Health Professions Schools.

Dr. LEWIS. Mr. Chairman, if it is all right, may we reverse the order?

Senator CHILES. Certainly.

Dr. LEWIS. Mr. Chairman, I want to bring you greetings from the Sunshine State. My name is Henry Lewis. I am the associate dean of the College of Pharmacy at Florida A&M University. I am pleased to appear before you this morning to discuss funding for health professions training, biomedical research, and student and institutional aid.

The Association of Minority Health Professions Schools, which I represent this morning, includes the Morehouse School of Medicine, the Meharry Medical and Dental Colleges, Charles R. Drew Postgraduate Medical School, Florida A&M University's College of Pharmacy and Pharmaceutical Sciences, Xavier University's College of Pharmacy, Texas Southern University School of Pharmacy, and the Tuskegee University School of Medicine.

The eight institutions of our association have graduated 43 percent of the Nation's black physicians and dentists, 50 percent of the Nation's black pharmacists, and 90 percent of the Nation's black veterinarians. Each of our institutions and the students who attend our schools rely heavily on Federal institutional and student aid programs.

The collective and individual goals of our institutions to increase the number of black and other minority health professions in the Nation are affected profoundly by your subcommittee's recommendation.

Mr. Chairman, the fiscal year 1988 budget request by the President for health profession programs and educational assistance is again unrealistic. The administration's request is frankly frustrating, rhetorical, and inconsistent with the findings and recommendations made by the recent Health and Human Services Secretary's task force report on black and minority health.

The Secretary's task force report is an exceptional document that points out the health status gap that exists among blacks when compared to the whites. But the document is nothing more than a stack of paper, Mr. Chairman, without the commitment and the followup of the administration, the Congress, and Federal agencies to provide resources and programmatic activities necessary to close the gap in health care.

Fortunately, the Congress and your subcommittee in particular has recognized the need to continue and expand resources in support for these efforts. Further, by rejecting unrealistic rescissions, deferrals, and impoundment of critical health services and research funding contained in the President's budget proposal, your subcommittee has again come through. We appreciate that support.

Permit me to briefly discuss the health professions. Health professions programs supported by your subcommittee have had a tremendous impact on Federal efforts to supply the Nation with qualified health professionals. Minority health professions in medicine, dentistry, pharmacy, and veterinary medicines are disciplines that continue to experience severe shortages of minorities.

While blacks represent roughly 12 percent of the U.S. population, only 2.6 percent of the Nation's physicians are black, 2.9 percent of the

Nation's dentists are black, 2.3 percent of the Nation's pharmacists and 1.6 percent of the Nation's veterinarians are black.

The coexisting health status disparity described by the Secretary's task force report is no coincidence. It is well documented that the black health professions are more likely to return to underserved minority communities to practice than their white colleagues. For these reasons, we recommend you continue adequate funding for all health professions programs, and provide as much emphasis as possible on targeting these resources to minority students and institutions.

Exceptional financial need, disadvantaged assistance, National Health Service Corps scholarships, area health education centers, various primary care training programs, and health education assistance loans are programs that are the genuine base of resources for our institutions and the students who attend them.

The Association of Minority Health Professions Schools urges your subcommittee to fund all health professions programs at their fully authorized levels for fiscal year 1988.

I would now focus upon minority research. In the recent years the institutions of our association have begun to participate more in Federal biomedical research efforts conducted through the National Institutes of Health and other Federal scientific agencies. We are pleased with the progress many of our schools have made in the development of research infrastructure and capability.

The research centers at minority institutions programs supported by your subcommittee have proven to be an exceptional mechanism for the development of our institutional research capacity. Schools of our association that participate in the RCMI Program have enhanced their research infrastructures in many ways.

RCMI grants have allowed our institutions to obtain state-of-the-art laboratory equipment and supplies, hire additional expert research faculty to complement our existing staff, provide for faculty development programs, create training opportunities for undergraduate and graduate students, enable us to fortify institutional services that support research and technical expertise throughout our institutions.

For the RCMI Program, our association would like to make several recommendations for fiscal year 1988. Foremost, Mr. Chairman, two schools of our association qualify for RCMI funding that are not being funded currently.

Tuskegee University of Veterinary Medicine has successfully competed for an RCMI award but has not been funded. Xavier University has recently been approved for a pharmacy doctor program, and is now eligible to participate in the RCMI Program.

In order to maintain these programs at our institutions while providing opportunities for these and other qualified schools, our association recommends fiscal year 1988 funding of $15 million for the RCMI Program.

I realize my time has run out, Mr. Chairman. I would like to just briefly say one other or two things. The Association of Minority Health

Professions Schools is also very supportive of the biomedical research support programs——

Senator CHILES. Pardon me for cutting off a rattler, Henry, but you have got to help me here, because I have got a room full of people that all want to speak.

Dr. LEWIS. I understand, Mr. Chairman. We are supportive of the MBRS Program, the Minority Access to Research Careers Program, and we are also supportive of the $7.4 billion recommendation of the ad hoc committee on medical research funding for NIH.

PREPARED STATEMENT

In closing, Mr. Chairman, I think we would like to commend your subcommittee for the efforts in support of the programs that have enhanced the Association of Minority Health Professions Schools, and we ask your continued support in the future.

[The statement follows:]

STATEMENT OF DR. HENRY LEWIS

Mr. Chairman and Members of the Subcommittee, I am very pleased to appear before you to discuss funding for health professions training, biomedical research, and student and institutional aid.

The Association of Minority Health Professions Schools (AMHPS) includes the Morehouse School of Medicine, Meharry Medical and Dental Colleges, Charles R. Drew Postgraduate Medical School, Florida A&M University College of Pharmacy, Xavier University College of Pharmacy, Texas Southern University School of Pharmacy and Tuskegee University School of Veterinary Medicine. The eight institutions of our Association have graduated 43% of the nation's black physicians and dentists, 50% of the nation's black pharmacists, and 90% of the nation's black veterinarians. Each of our institutions, and the students who attend our schools rely heavily upon federal institutional and student aid programs. The collective and individual goals of our institutions to increase the number of black and other minority health professionals in the nation are affected profoundly by your subcommittee's recommendations.

Mr. Chairman, the fiscal year 1988 budget request by the President for health professions programs and educational assistance are again unrealistic. The Administration's request is, frankly, frustrating, rhetorical, and inconsistent with the findings and recommendations made by the recent HHS Secretary's Task Force Report on Black and Minority Health. The Secretary's Task Force Report is an exceptional document that points out the health status gaps that exist among blacks when compared to whites--but the document is nothing more than a bunch of paper without the commitment and follow-up by the Administration, Congress, and federal agencies to provide resources and programmatic activities necessary to close the health status gap.

Fortunately, the Congress and your Subcommittee, in particular, has recognized the need to continue and expand resources and support for these efforts. Further, by rejecting unrealistic rescissions, deferrals and impoundment of critical health services and research funding contained in the President's budget proposal, your subcommittee has come through again. We appreciate your support.

Health Professions

Health professions programs supported by your subcommittee have had a tremendous impact on federal efforts to supply the nation with qualified health professionals. Minority health professionals in medicine, dentistry, pharmacy, and veterinary medicine are disciplines that continue to experience severe shortages. While blacks represent roughly 12% of the U.S. population, only 2.6% of the nation's physicians, 2.9% of the nation's dentists, 2.3% of the nation's pharmacists, and 1.6% of the nation's veterinarians are black. The co-existing health status disparity described by the Secretary's Task Force Report is no coincidence. It is well documented that black health professionals are more likely to return to underserved minority communities to practice than are their white colleagues. For these reasons we recommend you continue adequate funding for all health professions programs, and provide as much emphasis as possible on targeting these resources to minority students and institutions. Exceptional Financial Need, Disadvantaged Assistance, National Health Service Corps Scholarships, Area Health Education Centers, various primary care training programs, and Health Education Assistance Loans are programs that are the genuine base of resources for our institutions, and students who attend our schools. The Association of Minority Health Professions Schools urges your subcommittee to fund all health professions programs at their fully authorized amount for FY'88.

Minority Research

In recent years, the institutions of our association have begun to participate more in federal biomedical research efforts conducted through the National Institutes of Health, and other federal scientific agencies. We are very pleased with the progress many of our schools have made in the development of research infrastructure and capability. The Research Centers at Minority Institutions program supported by your subcommittee has proven to be an exceptional mechanism for the development of our institutional research capacity. Schools of our association that participate in the RCMI program have enhanced their research infrastructures in many ways. RCMI grants have allowed our institutions to obtain state-of-the-art laboratory equipment and supplies, hire additional expert research faculty to complement existing staff, provide faculty development programs, create training opportunities for undergraduate and graduate students, enable us to fortify institutional services that support research and technical expertise, and most importantly RCMI has served as a major stimulus and justification in the capability of our schools to compete for other, more traditional sources of research funding. For the RCMI program our association would like to make several recommendations for fiscal year 1988. Foremost, Mr. Chairman, two schools of our association qualify for RCMI funding, but are not being funded. Tuskegee University School of Veterinary Medicine has successfully competed for an RCMI award, but has not been funded because of lack of resources. Xavier University has recently approved a Pharmacy Doctorate Program, and is now eligible to participate in and receive RCMI support. In order to maintain the RCMI programs at other institutions, while providing opportunities for these other qualified schools, our association recommends an FY'88 funding level of $15 million for RCMI, an acceleration consistent with the growth of many other NIH programs targeted towards specific populations and disease categories. Further, our recommendations include increasing the institutional ceiling for RCMI grants. From our perspective, in order to meet the minimum requirements for developing our research infrastructures, a ceiling of $1 million, excluding indirect costs would be more appropriate than the current ceiling of $1 million including direct and indirect costs. Our association would also like to encourage the Committee to explore how specific NIH institutes could supplement RCMI Grants with research funding provided by the Congress. In the same context, we urge the subcommittee to follow through on the development of an ADAMHA/RCMI model. We have made many unsuccessful attempts to work with ADAMHA to develop this, despite Committee recommendations. Our association also recommends that NIH guidelines be changed that would allow the RCMI funding received by our institutions be included when making consideration for Biomedical Research Support Grants (BRSG), and that the principle investigator of an RCMI award be allowed to be the principle investigator on other NIH research grants. This would be perfectly consistent with traditional NIH funding and grant mechanisms and policy.

The Association of Minority Health Professions Schools is also very supportive of the Minority Biomedical Research Support Programs (MBRS), and the Minority Access to Research Careers Program (MARC), and we encourage your subcommittee to provide adequate resources to fund those initiatives. Further, we believe a review of the stipend levels for these programs is due.

Mr. Chairman, our organization supports the funding recommendation of $7.4 billion for the NIH, in coordination with the Ad Hoc Committee on Medical Research Funding.

Other Vital Programs

The Office of Minority Health, for the first time since its existence, has been established as a line item in the President's

FY'88 budget request. Our association is encouraged by this. However, the level of funding ($4 million) is not adequate to sustain the activities necessary to coordinate departmental initiatives aimed at carrying out the Secretary's Task Force Report. We urge that the Office of Minority Health be funded at significantly higher levels, and that the office be primarily utilized to impact upon other federal agency programs geared towards minority health.

Mr. Chairman, we are also very pleased that your subcommittee has taken action in the FY'87 supplemental appropriation to increase the funding level for the Maternal and Child Health Block Grant. The institutions of our Association that are affiliated with medical care facilities, serve a great number of poor and minority women and children who benefit directly from these resources. Believe me, this is federal funding well spent.

Higher Education

In late 1986, Congress, passed the Higher Education Act Reauthorization. Our association is very pleased with the initiatives set forth in the reauthorization. Student aid and institutional support has never been more critical to our schools and the individuals who attend our schools.

Pell Grants, Guaranteed Student Loans, Supplemental Educational Opportunity Grants, College Work Study and National Direct Student Loans are of major importance to our student body's ability to remain in school. Other graduate professional opportunity programs also play a critical role.

Title III of the Higher Education Act has been improved significantly in several ways. The Historically Black Colleges and Universities endowment development components represent an important source of non-traditional funding for all HBCUs. We urge the subcommittee to provide as high a level as possible for the endowment component of Title III, Part B, at least $60 million.

Section 326 of Part B establishes a program of development grants for five historically black professional or postgraduate schools that are determined to make a substantial contribution to the legal, medical, dental and veterinary opportunities for black Americans. Four of the eight institutions in our Association are included in this section. Mr. Chairman, we rely heavily upon this support, and request that your subcommittee provide an adequate level of funding.

This concludes our statement, Mr. Chairman, excluding that we wish to express our utmost appreciation for your subcommittee's tireless support in past years, and now.

I am pleased to respond to any questions you have.

APPROPRIATIONS RECOMMENDATIONS FOR FISCAL YEAR 1988

A. Disadvantaged Assistance

FY'87 Actual	FY'88 President	FY'88 AMHPS
$27.5 MILLION	-0-	$30 MILLION

Disadvantaged Assistance grants and contracts are vital to the identification, recruitment, retention, and placement of minority and disadvantaged students. Institutions rely heavily upon these grants. Students also rely on these funds for support. AMHPS recommends the program be improved to allow for authorization changes made.

B. Exceptional Need Scholarships

FY'87 Actual	FY'88 President	FY'88 AMHPS
$7 MILLION	-0-	$7 MILLION

Exceptional need funds are allocated to health professions schools that award students with Exceptional Financial Need scholarships for their first year of post-baccalauret study.

C. Research Centers at Minority Institutions (Office of the NIH Director).

FY'87 Actual	FY'88 President	FY'88 AMHPS
$10 MILLION	$10 MILLION	$15 MILLION

These grants to fund Research Centers at Minority Institutions (RCMI) are critical to the development of research infrastructures, training minority professionals in research capacities, compete for research dollars, and most importantly research health problems common to blacks and other minorities.

D. Centers of Excellence in Minority Health Professions Education

FY'87 Actual	FY'88 President	FY'88 AMHPS
$3.9 MILLION Financial Distress Funding	-0-	$10 MILLION

Provide $10 million to establish Centers of Excellence in Minority Health Education at Meharry Medical and Dental Colleges, Tuskegee University School of Veterinary Medicine, and Xavier University School of Pharmacy. These funds would reward these institutions for the expertise they have developed in training minorities for the health professions and the progress they have made in improving their other institutional capabilities.

E. Area Health Education Centers

FY'87 Actual	FY'88 President	FY'88 AMHPS
$18 MILLION	-0-	$18 MILLION

The AHEC Program is designed to increase the number of health practitioners in shortage areas by providing funds to medical and osteopathic schools to have portions of training provided in primary medical personnel shortage areas.

F. Office of Minority Health

FY'87 Actual	FY'88 President	FY'88 AMHPS
$4 MILLION	$4 MILLION	$8 MILLION

The newly established office of Minority Health should receive line item funding through the Office of the Assistant Secretary for Health of $8 million. The Office of Minority Health will assist the Department in developing policies that will carry out the recommendations of the Secretary's Task Force on Black and Minority Health.

G. National Health Service Corps Scholarships

FY'87 Actual	FY'88 President	FY'88 AMHPS
$2.3 MILLION	-0-	$10 MILLION

This level of funding is necessary to assure a continuous flow of minority specialists to low income, minority, underserved areas. A large number of new NHSC Scholarships are awarded to former Exceptional Need Scholarship recipients. The loan forgivenss program being considered now by Congress is a very attractive proposal.

H. Health Professions Student Loans

FY'86 Actual	FY'88 President	FY'88 AMHPS
-0-	-0-	$5 MILLION

These new HPSL funds should be used to assist minority institutions develop and maintain a sufficient revolving fund. Many minority institutions have not had sufficient time or resources to develop revolving funds.

I. Health Education Assistance Loans

FY'87 Actual	FY'88 President	FY'88 AMHPS
$290 MILLION (no limit)	$100 MILLION	$305 MILLION (no limit)

The Association of Minority Health Professions Schools recommends that there be at least $305 million available, or no limit placed upon these loans. Even these high interest loans are necessary in light of other severe fiscal restrictions.

J. Minority Biomedical Research Support (DRR)

FY'87 Actual	FY'88 President	FY'88 AMHPS
$25 MILLION	$24 MILLION	$30 MILLION

The Minority Biomedical Research Support Grant Program supports the participation of minority undergraduates, graduates, and faculty in biomedical research at minority institutions. AMHPS urges that the stipend level be increased substantially to insure an adequate number of bright, young, minority trainees.

DEPARTMENT OF EDUCATION

A. Guaranteed Student Loans

FY'87 Actual	FY'88 President	FY'88 AMHPS
$3.1 BILLION	$1.2 BILLION	$3.1 BILLION

The Association commends the special provision made to expand the limit of GSL to $54 thousand rather than $25 thousand for those students in the health professions, and urges appropriate resources be provided to allow for this improvement.

B. Pell Grants

FY'87 Actual	FY'88 President	FY'88 AMHPS
$3.8 BILLION	$2.7 BILLION	$3.8 BILLION

Pell Grants provide assistance to help financially needy undergraduate students meet educational costs.

C. National Direct Student Loans

FY'87 Actual	FY'88 President	FY'88 AMHPS
$215 MILLION	$27 MILLION	$225 MILLION

D. College Work Study

FY'87 Actual	FY'88 President	FY'88 AMHPS
$592 MILLION	$0 MILLION	$600 MILLION

E. Supplemental Educational Opportunity Grants

FY'87 Actual	FY'88 President	FY'88 AMHPS
$413 MILLION	$0 MILLION	$425 MILLION

F. Title III, Historically Black Colleges and Universities

FY'87 Actual	FY'88 President	FY'88 AMHPS
$50.7 MILLION	$50.7 MILLION	$60.7 MILLION

Title III, Historically Black Colleges and Universities requires a level adequate to fund the endowment programs and special postgraduate programs established by the Higher Education Act Reauthorization.

G. Title III, Part B, Section 326, Postgraduate Professional Institutions

FY'87 Actual	FY'88 President	FY'88 AMHPS
*$4 MILLION	-0-	$10 MILLION

The Higher Education Act Reauthorization established a program of development grants to institutions that make a significant contribution to the medical, veterinary medicine, dental and legal opportunities for minorities. Four of the eight AMHPS schools qualify for this critical funding.

*Congress is now considering a supplemental appropriation of $1 million.

STATEMENT OF DR. MARCELLUS GRACE, DEAN, XAVIER UNIVERSITY COLLEGE OF PHARMACY, NEW ORLEANS, LA

Senator CHILES. Thank you, sir. Dr. Grace? Henry has used your time, but I will call on you anyway.

Dr. GRACE. Senator, thank you very much. I am Marcellus Grace, dean of the College of Pharmacy at Xavier University, and I will be very, very brief. My colleague, Dr. Lewis, has covered some of the points.

There are several points that, I am here to talk about a bill that is going through Congress now on the centers of excellence at minority institutions. I represent the Meharry School of Medicine and Dentistry, my own college of pharmacy, and the Tuskegee School of Veterinary Medicine.

We have, as you know, Senator, benefited from the Financial Distress Grant Program, which is in this year being phased out. We have made an unusual contribution, I think, to the training of black health professionals in this country.

The Meharry Program has trained over 50 percent of the Nation's black physicians, their dental school has trained 40 percent of the Nation's black dentists, Tuskegee has trained 90 percent of the Nation's black veterinarians, and my college of pharmacy has trained 25 percent of all the black pharmacists.

As you know, Congressman Bill Boner of Nashville, TN, and Senator Johnston from Louisiana have introduced two bills on the House side, H.R. 954, and in the Senate S. 769. These bills would authorize Meharry, Xavier, and Tuskegee to continue in this new program.

We urge the subcommittee to do everything you can to provide support for this program. We are asking for a modest $8 to $10 million for fiscal year 1988. We want to emphasize to you that time is running out and if we are not successful in getting a bill this year we would like to urge you to consider anyway the appropriations route.

I would like to just mention a recent General Accounting Office study that revealed that of the top 10 universities in the United States, they receive an average of $150 million per year in Federal research funding. In fact, Johns Hopkins receives over $400 million per year alone in Federal dollars.

We view the support that we are requesting as a similar function of the Federal Government to support the missions of our schools and train minorities to serve the underserved in our areas.

I would like to just show you a very brief graph, I promised you I would be brief, to make my final point. I do not think I will strain your eyes. I would like to bring it, if I could, up to show you.

This is a graph showing all of the over 500,000 physicians in the United States. Of those, only 2.9 percent are black. Fifteen thousand, and of that 15,000 50 percent of those doctors were trained at Meharry. Of the 140,000 dentists in the United States, only 3,800 of those are black, 2.7 percent, and Meharry trained 40 percent of those.

Of the 159,000 pharmacists in the entire United States, there are only 3,900 that are black, 2.7 percent of the total, and Xavier trained 75 percent of those.

Senator CHILES. How many did Florida A&M train?

Dr. LEWIS. We are 18 percent, sir. They slightly beat us out. They are older than we are.

PREPARED STATEMENT

Dr. GRACE. There is Xavier here. Tuskegee here, down in Alabama, and Meharry. We represent, for example, at Xavier College of Pharmacy, more than 73 colleges of pharmacy. I think that you will agree that this is a significant role that we play, and we want to keep these schools in business. We thank you for your time.

[The statement follows:]

Statement of Dr. Marcellus Grace

Mr. Chairman and Members of the Subcommittee, the institutions that I speak on behalf of today are at a critical phase in our development.

Because of the support of Congress, and your subcommittee in particular, the Meharry Medical and Dental Colleges, the Tuskegee University School of Veterinary Medicine and the Xavier University School of Pharmacy, have benefitted tremendously from the Advanced Financial Distress Grant Program. All three institutions have made significant progress during the period of Financial Distress phase-out since 1982. Two of our institutions, Meharry Medical College and Xavier College of Pharmacy, have benefitted from new leadership since 1982 and have fairly new management teams. The improvement in management at all of the institutions has been documented by site visit teams organized by the Department of Health and Human Services. All three institutions have operated a balanced budget and made great strides academically while phasing out dependence on Financial Distress funding.

However, because of many factors, particularly a significant reduction in other types of federal support geared to assisting minority and other disadvantaged schools and students, our institutions have been unable to completely attain the financial status we expected with Distress funding. Further, as each institution has become more stable, we have in place more advanced teaching techniques, clinical and research settings, faculty and facilities.

In August of 1985, the Secretary of the Department of Health and Human Services issued a detailed report outlining the critical health status disparities that exist in this nation among blacks when compared to whites. A major component of the problem identified by the Secretary's Task Force was that, while there may be an emerging abundance of physicians and other health professionals in the nation, quite the opposite is true among minority health professionals. While blacks represent 12 percent of the U.S. population, only 2.6% of the nation's physicians, 2.9% of the nation's dentists, 2.3% of the nation's pharmacists and 1.6% of the nation's veterinarians are black. This co-existing disparity is no coincidence. It is well documented that more black health professionals return to under-served black communities to practice than do whites. Naturally, because there are so comparatively few black health professionals to serve these areas, the health status disparity results.

Each of our institutions has attained a great deal of expertise in recruiting, retaining, teaching, training, and producing a scarce national resource identified as a health status factor in the Secretary's Task Force Report -- the black health professional. 50% of the nation's black physicians, 40% of the nation's black dentists, 90% of the nation's black veterinarians, and 20% of the nation's black pharmacists have been trained at Meharry, Tuskegee, and Xavier.

Our three schools continue to be in need of support, but in a much different, more positive way. Because our schools have developed the aforementioned expertise in training minorities in the health professions, this national resource should be exploited and our institutions rewarded for developing this expertise, and to address the black health status goals stated in the Secretary's Task Force report.

Rather than financially distressed, our institutions have developed the expertise, facilities, and capability to have a significant impact on training of minorities, recruiting and retaining disadvantaged students, studying health problems affecting blacks, and treating the clinical health needs of the nation's under-served population. This expertise in minority health professions education should be rewarded just as the nation's Cancer Centers at major institutions are rewarded for their expertise in cancer research.

Mr. Chairman, as you probably are aware, legislation has been introduced in the House and Senate to accomplish this Centers concept.

In the House, Congressmen Bill Boner of Nashville, Bill Nichols of Tuskegee and Congresswoman Lindy Boggs of New Orleans, with the unanimous support of all three of our states delegations, along with Congressmen Louis Stokes and Mickey Leland have introduced H.R. 954.

A similar situation exists on the Senate side, in that Senator J. Bennett Johnston, with Senators John Breaux, Howell Heflin, Richard Shelby, Albert Gore, and Jim Sasser along with Senator Edward Kennedy have introduced S. 769.

The bills would authorize the Meharry Medical and Dental Colleges in Nashville, Tennessee; the Xavier University College of Pharmacy in New Orleans, Louisiana; and the Tuskegee University School of Veterinary Medicine in Tuskegee, Alabama as Centers of Excellence in Minority Health Professions Education. Each school would be authorized to receive modest federal awards to continue to establish their educational facilities, augment new faculty and enhance scientific and educational opportunities. The ultimate goal of the Centers of Excellence program is to increase the numbers of minority health practitioners to assist in narrowing the considerable health status gap among blacks and other minorities when compared to whites, and to assist in the development of the nation's ability to respond to this long-term problem.

Mr. Chairman, we urge your subcommittee to do everything possible to provide adequate resources for this top priority program. We are recommending a level of funding of $8-10 million for fiscal year 1988, and modest incremental increases for further years. In addition, because of the timetable associated with the recently introduced authorizing legislation, clearly it is possible that it would be necessary to initially fund this program through the general Public Health Service authority. We recognize this is not the most desirable route, but we firmly believe an FY'88 lapse in this support would represent a major set-back for all of our schools.

This may be an appropriate time to mention a recent General Accounting Office study that revealed the top 10 universities in the nation receive an average of about $150 million per year in federal research funding to support their missions. In fact, John Hopkins University receives over $400 million per year, alone, in federal dollars. We view the support that we are requesting as a similar function of the federal government. To support the missions of our schools to train minorities to serve in underserved areas. This is, too, a priority of our nation. The only difference is that we are requesting a minimum amount of funding to divide up amongst our three schools.

On behalf of my colleagues at Tuskegee and Xavier, I wish to express our deepest appreciation for the support you have provided our institutions in the past. Because of our historic missions to train poor, minority individuals in the health professions, it is very unlikely that we will ever rival the resources of the other, better off, institutions of our country. This is why we continue to rely on your support and consideration.

I am pleased to respond to any questions you have.

Senator CHILES. Thank you both for your testimony. We want to welcome some of our colleagues that we have from the African countries that are here, and from some of our other countries in the region. Tunisia, Zambia, Togo, Tanzania, Chad, Congo, and Sudan.

I just wanted to explain to them that in our process now we are an appropriations subcommittee, we have had testimony from the administration witnesses, those supporting the President's budget, and those supporting other areas. Now we are listening to public witnesses. These would be people that are coming up and wanting to give us testimony on the budget.

This morning we are in sort of the health area and we are taking testimony. This subcommittee covers education, health and human services. So we cover the gamut. The total moneys that we are looking at here are around $125 billion in this subcommittee of appropriations. And we are listening to people now give their explanation of the budget.

We welcome you here. We are very happy to have you in our country, and we hope you are enjoying your stay. I just want to give you a round of applause.

[Applause.]

STATEMENT OF DR. ARTHUR FALEK, PROFESSOR OF PSYCHIATRY, EMORY UNIVERSITY SCHOOL OF MEDICINE

Senator CHILES. Now we will hear from Dr. Arthur Falek, from Emory University School of Medicine.

Dr. FALEK. Good morning, Mr. Chairman. I am here today as science chairman of the board of the Huntington's Disease Society of America.

My statement is for Congress, for the Senate, to seize the opportunity provided with recent molecular genetic advances in Huntington's disease, and now with other late onset genetic disorders by increasing research funds to NIH and ADAMHA.

The new techniques that uncover the chromosome locations for these disorders are not only opportune for genetic counseling to at-risk family members, but provide the potential of controlling these disorders prior to onset, and as well treatments to monitor their progression in affected individuals.

Huntington's disease, the prototype to explore such research opportunities, is both a neurological and psychiatric disorder, clearly genetic with onset usually in middle life. From onset to death 15 to 18 years later, there is constant deterioration leading to total random uncontrolled body movements and dementia.

The chromosomal identification of the gene for Huntington's disease in 1983 and for Alzheimer's disease this year permits use of methods for their specific gene locations and research to inhibit, replace, or alter the mutant gene. In the past year these molecular genetic techniques also were employed successfully to locate the genes for neurofibromatosis, and bipolar manic depression.

In spite of these successes, this year the administration wants to defer portions of their current research budget for NIH and ADAMHA to 1988, and also wants to decrease the moneys for funding new and competing grants in 1988. For NINCDS, for example, the administration requests funds that will decrease the 660 grants in 1987 to 489 in 1988, while for NIMH a similar cutback would decrease the number of grants from 1,226 in 1987 to 1,088 in 1988.

In fact 1987 has not been such a good year to secure Federal research funds. The same laboratory that located the chromosome with the Huntington's disease gene in 1983 and last year identified the chromosomes with the gene for neuroma and for Alzheimer's disease requested funds from the National Institute of Aging to continue their studies in Alzheimer's disease.

In spite of an excellent priority score, and expectations of funding, they were informed recently that the institute did not have sufficient money to fund their study. At present Alzheimer's disease affects 2 to 4 million Americans, and a fivefold increase is expected in 50 years.

Furthermore, a 10-percent cutback was requested again this year from almost all previously funded federally sponsored research programs. And this is but a short list. Obviously the administration appropriation request for 1988 will make the current situation worse.

What these monetary manipulations also cause is the depletion in the number of bright, young people entering biomedical research because of funding insecurities, even in laboratories of our most productive scientists. Your help is needed to quell this tide before it becomes a crisis.

Long-term patient care support is another important issue requiring congressional action for those concerned about Huntington's disease, Alzheimer's disease, other mid-life onset long-term catastrophic illnesses that resolve into dementia.

Most bills in Congress on patient care issues limit attention to the elderly and in particular to those requiring skilled care. These bills do not address those illnesses with earlier onsets or services of those with dementia who do not require skilled care.

The costs for nursing home intermediate care as those displayed for many years by Huntington's disease patients can have a catastrophic impact on family care givers as well as the ill person. Congressional action is needed to help these families deal with the expenses of long-term nursing home care until the expected research advances relieve the situation.

To maintain the status quo is pessimistic and inappropriate in light of current research achievements. At present successful outcomes for these patients is measured in relation to their early natural deaths, in quotes, and the release of their families from economic and emotional bondage. Thank you.

Senator Chiles. Doctor, you might not be aware but in the supplemental the Senate and the Appropriations Committee did turn down the administration's request for carrying over those funds.

Dr. Falek. That is excellent.

Senator Chiles. So your testimony has already been heard.

Dr. Falek. I appreciate that.

PREPARED STATEMENT

Senator Chiles. We hope the Senate will go on with that, and we hear your statement loud and clear and we thank you.

Thank you. We will place your prepared statement in the record at this point.

[The statement follows:]

STATEMENT OF DR. ARTHUR FALEK

My testimony is directed to the importance of not only maintaining but increasing research funds to the National Institutes of Health and ADAMHA to assure the continuation of both the basic science and the patient care aspects of catastrophic disorders such as Huntington's disease.

I requested this opportunity to speak before you as a research scientist in human and behavior genetics with long experience with patients and families with Huntington's disease. Our Society is the family support organization concerned with Huntington's disease.

This long-term neuropsychiatric disorder usually starts between the ages of 35-45 years with ever increasing random motor movements spreading over the entire body along with an organic psychiatric disfunction evolving into dementia. For the majority of affected persons, age of onset is in midlife with about 15-18 years of continued, debilitating illness. However, some individuals are affected as young as age four, while others show evidence of the disease in their late 60's.

Huntington's disease is dominantly inherited so that each child of an affected parent has a 50% chance of developing this disorder. Because a linked probe for the gene for the disorder has recently been located on the upper arm of chromosome 4, more specific genetic counseling for at risk individuals prior to onset is now available. The aim now is to locate the gene. From a molecular biology prospective the needed steps to develop a successful therapy against Huntington's disease are to precisely locate and sequence the gene and identify the altered gene product with the aim towards inhibiting, correcting or replacing it so as to produce the normal product. Therefore, while a major and important first step in molecular genetics has been accomplished, there is still much work to do. There is as yet no cure for those with Huntington's disease and no way to modify its ravaging effects after onset.

Huntington's disease is a prototype for other later onset genetic disorders such as Alzheimer's disease, Pick's disease and the various genetic ataxias. Therefore, methods for more definitive preclinical diagnosis, for improved long-term patient care and eventually treatment for those already affected should evolve from the methods developed with Huntington's disease. In fact, in the past year molecular and genetic techniques utilized in identifying the chromosomal location of the gene for Huntington's disease have been successfully employed to determine the chromosomal locations of genes for Alzheimer's disease, neuroma and bipolar manic depression.

In contrast to the air of excitement and expectation of those in the biomedical field and the family members in the at risk communities because of these achievements, in this fiscal year the administration wants to defer portions of the current NIH and ADAMHA research budgets to FY 1988. In addition, the Administration has proposed a decrease in the number of new and competing grants to be funded by these agencies in 1988. The two National Institutes most specifically involved in studies of the disorders mentioned above are the NINCDS and the NIMH.

For the NINCDS a total of 660 new and competing extramural grants are expected to be funded this year, if no deferral of a portion of this year's approved budget occurs. For 1988 a cutback has been proposed to decrease that number to 489 grants. Similarly, for 1987 the Administration requested a deferral of a significant portion of the NIMH research budget to FY 1988 and to decrease the number of grants from 1226 appropriated by Congress in 1987 to 1088 requested for 1988.

While these numbers would suggest that 1987 is a good year for securing research funds, this is not so for many investigators. Let me provide you with a few examples of how funding manipulations impact on research. One of the major achievements this year in molecular genetics was the report from the Neurogenetics Laboratory at Massachusetts General Hospital of the location of a gene associated with Alzheimer's disease on chromosome 21. The Office of Technology Assessment on April 7th noted that with the increase in the aged population, by the year 2040 a fivefold increase in the number of Americans suffering from Alzheimer's disease is to be expected. The estimate is that at present Alzheimer's disease afflicts between two million and four million Americans and that without an effective cure this number will rise precipitously. A grant application to the Institute on Aging to conduct further studies on the Genetics of Alzheimer's Disease by the Massachusetts General Hospital group (this group also found the locations for the gene for Huntington's Disease on Chromosome 4, neuroma on chromosome 22 and manic depression on chromosome 11) received an excellent priority score from the National Institute on Aging and thought that they would be funded. As of the time of the writing of this document, however, they have been informed that the Insitute on Aging did not have the money to fund this program. Other research programs, such as one from a member of my staff on the behavioral and cognitive consequences to newborns of mother's using cocaine in pregnancy, have been approved but delayed for funding because of the money crunch. Furthermore, for many currently funded research programs, including those in human molecular biology, a 10% cutback in funds has been levied once again this year. At the NIMH to maintain their goal to prioritize support for extramural research in schizophrenia (which affects 1% of the general population), other NIMH supported studies will require a 10% decrease in funding. For many of these studies the laboratory techniques developed for one disease entity will find application in exploring other disorders of significance in the population. As both an administrator and research scientist in human behavior genetics I should like you to know that we are depleting the ranks of bright young people entering our research fields because of these funding insecurities. Such a depletion of scientific professionals is even occurring in the laboratories of our most productive investigators. Your help is urgently required to quell this tide before it becomes a crisis.

With regard to long-term care needs for patients with Huntington's disease, like the other late onset disorders that resolve into dementia, most current bills in Congress concerned with catastrophic care limit attention to those classified as aged and do not address the needs of those whose long-term terminal disorders have earlier ages of onset. Even in those bills where the need for an earlier age of onset issue is addressed, the provision of funding for nursing home care is for those patients requiring skilled care rather than for those with dementia who for a long period of time only require intermediate care services.

The national costs now for the care of dementia patients are estimated at $40 billion dollars annually with about $8.5 billion paid by the states and the federal government under the Medicaid program and most of the remainder paid by the patients and their families. Federal funding for research on dementia is projected to reach $67 million dollars in 1987. Obviously, research funding to control these disorders, and in particular those that demonstrate a major genetic etiology, are significantly less expensive than the yearly costs for long-term nursing home care for affected persons. With family members often forced to lose their jobs and finally resort to welfare in order that they provide full-time care for these patients, and in particular those frequently unacceptable to nursing homes because of emotional instabilities that are part of the disease process, the actual costs to patients and their families are evidently much higher than indicated. Biomedical advances such as those now being demonstrated for Huntington's disease will in time result in methods to control the progress of this and many other late onset disorders. Congressional action is required to increase funding to support scientific research that in a period of time will provide treatment approaches to control the progress of many of these disorders prior to physical and mental deterioration. This will sharply reduce the ever mounting federal, state and personal costs now required for the long-term care of physically disabled, demented patients. Congressional action, as well, is needed urgently to help families now facing the expenses of long-term nursing home costs from economic as well as emotional depression. Successful outcomes for these patients is now measured in relation to their early "natural" deaths and the release of these families from both economic and emotional bondage.

STATEMENT OF DR. NICHOLAS BODOR, GRADUATE RESEARCH PROFESSOR, COLLEGE OF PHARMACY, UNIVERSITY OF FLORIDA, GAINESVILLE, FL

Senator CHILES. Now we will hear from Dr. Nicholas Bodor, the Center of Drug Design and Delivery, University of Florida at Gainesville.

Dr. BODOR. Mr. Chairman, members of the committee, thank you for allowing me to make a statement on behalf of the fiscal year 1988 appropriations for the National Institute of General Medical Sciences.

I am a graduate research professor and director of the Center for Drug Design and Delivery, College of Pharmacy, University of Florida in Gainesville. Since 1979 I have been conducting a basic research program at the University of Florida, which is financially supported by NIGMS.

This research relates to a generic method for highly specific transport of the drug species into the brain, using a unique redox carrier system analogous to the ubiquitous NAD NADH coenzyme system.

The carrier system is providing insight into the basic transport processes of, and enzymatic activities in, the blood-brain barrier, as well as into the various processes specific to the function of the brain. It has also provided a general method for brain-delivery of drugs in many different therapeutic categories, which were previously unable to adequately penetrate the blood-brain barrier or to be maintained at therapeutic levels in the brain.

Advantages of the carrier system include lower peripheral concentrations of the active agent, which consequently reduced systemic toxicity and greater efficacy.

I am very grateful for the support which NIGMS has provided for this basic fundamental research. The NIGMS funding has meant that I have been able to demonstrate the validity of my concept to such an extent that it has been possible to attract venture capital.

My concept has thus developed into an important, patented drug delivery system. A research company, Pharmatec, Inc., has been formed and has established laboratories in Alachua, FL, at the Research and Technology Park of the University of Florida, with the ultimate goal of commercialization of the invention.

So far Pharmatec has received over $10 million in private capital. Several drug-carrier combinations are expected to enter clinical trials in 1987 and 1988. It is believed that greatly improved treatments for brain cancer, brain inflammation, AIDS, prostate and endometrial cancers, hyperprolactinemia, Parkinsonism, anxiety, herpes simplex, bacterial brain infections, and other diseases will ultimately result from this research.

The collective potential market for the drug-carrier combinations has been projected to be in the hundreds of millions of dollars by the mid-1990's

An enhanced NIGMS budget is critically important for progress in basic research, which can rapidly lead to commercial applications. I believe that the importance of NIGMS funding and its practical implications can be clearly seen from cases such as mine.

If future significant advances in medical care are to take place, they will do so as a result of our seeking answers to very basic questions. The fundamental research funded by the National Institute of General Medical Sciences lays the necessary groundwork for subsequent more specific studies supported by all of the categorical institutes and by private industry.

I urge your support for increased funding levels for NIGMS. Thank you.

PREPARED STATEMENT

Senator CHILES. Thank you very much, doctor, and we appreciate the work that you are doing at the university.

[The statement follows:]

Statement of Dr. Nicholas Bodor

Thank you for allowing me to make a statement on behalf of the fiscal year 1988 appropriations for the National Institute of General Medical Sciences (NIGMS).

I am a Graduate Research Professor in the Department of Medicinal Chemistry and Director of the Center for Drug Design and Delivery, College of Pharmacy, University of Florida, Gainesville, Florida. Since 1979, I have been conducting a basic research program at the University of Florida which is financially supported by NIGMS. This research relates to a generic method for the specific and target enhanced, sustained delivery of drugs to the brain which provides highly specific transport of the drug species into the brain, using a unique redox carrier system analogous to the ubiquitous NAD ⇅ NADH coenzyme system. The carrier system is providing insight into the basic transport processes (both active and passive) of, and enzymatic activities in, the blood-brain barrier, as well as into the various processes specific to the function of the brain. It also has provided a general method for brain-delivery of drugs, in many different therapeutic categories, which were previously unable to adequately penetrate the blood-brain barrier or to be maintained at therapeutic levels in the brain. Advantages of the carrier system include lower peripheral concentrations of the active agent, with consequently reduced systemic toxicity, and greater efficacy, since a lower dose can be given to attain clinically effective cerebral concentrations.

I am very grateful for the support which NIGMS has provided for this fundamental biomedical research. Without that support, my concept for brain-specific drug delivery might well have remained only an idea for many years. In contrast, the NIGMS funding has meant that I have been able to demonstrate the validity of my concept to such an extent that it has been possible to attract venture capital. My concept has thus developed into an important, patented drug delivery system. A research company, Pharmatec, Inc., has been formed and has established laboratories in Alachua, Florida, at the Research and Technology Park of the University of Florida, with the ultimate goal of commercialization of the invention. So far, Pharmatec has received over $10 million in venture capital, and 12 patent applications based on this concept have been filed: two major ones have been issued already. The concept has attracted a lot of attention, and the University of Florida has been successful in licensing it. As a result, at the present time, Pharmatec has 25 full-time employees, including 22 in Research and Development. Research is being actively pursued at Pharmatec's laboratories in many therapeutic categories, including anticancer agents, antivirals, antiinflammatories, sex hormones, anticonvulsants, antibacterials and radiopharmaceuticals. Some of this work is being carried out under agreements with other companies such as DuPont, Nihon Medi-Physics, Burroughs-Wellcome, Nova Pharmaceuticals and Gynex. Moreover, Pharmatec has received grant support from NIH for research in the sex hormone area, and is negotiating contracts with the United States Army and NIH in the antiviral area. Several drug-carrier combinations are expected to enter clinical trials in 1987 and 1988. It is believed that greatly improved treatments for brain cancer, brain inflammation, AIDS, post-menopausal symptoms, prostate/endometrial cancers, hyperprolactinemia, Parkinsonism, anxiety, sexual dysfunction, birth control, herpes simplex, cytomegalovirus, epilepsy, bacterial brain infections and other diseases will ultimately result from this research. The collective potential market for the drug-carrier combinations has been projected to be in the hundreds of millions of dollars by the mid-1990's.

An enhanced NIGMS budget is critically important for progress in basic research, which can rapidly lead to commercial applications. I believe that the importance of NIGMS funding and its practical implications can be clearly seen from cases such as mine. If future significant advances in medical care are to take place, they will do so as a result of our seeking answers to very basic questions. The fundamental research funded by the National Institute of General Medical Sciences lays the necessary groundwork for subsequent more specific studies supported by all of the categorical Institutes and by private industry.

I urge your support for increased funding levels for NIGMS.

STATEMENT OF DR. MELANIE C. DREHER, DEAN, UNIVERSITY OF MIAMI SCHOOL OF NURSING

Senator CHILES. Now we will hear from Dr. Melanie Dreher, dean of the University of Miami School of Nursing, talking for the National League of Nursing. Dr. Dreher?

Dr. DREHER. Mr. Chairman, I am Melanie Dreher, dean of the School of Nursing, University of Miami, and I appear on behalf of the American Association of Colleges of Nursing, the American Nurses Association, the American Organization of Nurse Executives, and the National League of Nursing.

I am here today to gratefully acknowledge the committee's past support of nursing education and research and to urgently request continued funding. As you know, Mr. Chairman, we are in the midst of dramatic change in the American health care system.

The aging of our population, technological advances, and health care financing reforms are converging to fuel a burgeoning demand for nurses. Yet we have entered an unprecedented and profound period of chronic nursing shortage across the Nation.

In just 1 year the RN vacancy rate in hospitals more than doubled, from 6.3 percent to 13.6 percent. At the same time enrollments in programs preparing registered nurses dropped nearly 10 percent. Unless we increase nursing supply in proportion to the projected demand, the health and well-being of our citizens, especially the oldest and most vulnerable, are at very real risk.

All of this is occurring at a time when there are more nurses practicing than every before. In 1977 there were 1.4 million registered nurses in the Nation, 70 percent of whom were employed full time. By 1984 the number had grown to 1.9 million, with more than 79 percent in the work force.

Clearly this is not a climate in which the American public would be well-served by the curtailment in Federal support of nursing education proposed by the administration. Furthermore, such cuts would be counterproductive, as numerous studies have demonstrated the cost savings that accrue from effective utilization of nursing resources.

The need now and in the future is particularly acute at the postbaccalaureate level on which current Federal funding programs are focused. It is now projected that 500,000 nurses, prepared at the graduate level, will be needed by the year 2000, but that the supply will only be about 170,000.

We, therefore, urge the continued support of this committee for nurse education funding under the Public Health Service Act. Advanced nurse education funds provide support to collegiate schools for the preparation of nurses at the master's or doctoral level, while professional traineeships enable individual nursing students to pursue graduate work.

Special project funds increase nursing education opportunities such as a program at the University of Hawaii to reach out to the disadvantaged student. Demonstration projects improve access to nursing services, such as an Ohio Health Department program in which nurses deliver care to incarcerated adolescents.

Nursing research projects administered through the new National Center for Nursing Research conduct studies that improve the quality of care to patients and their families in a cost-effective manner. For example, a University of Florida study examines the factors that contribute to successful parenting, and an investigation of pediatric pain management is on the way at the University of California, San Francisco.

Mr. Chairman, we appreciate the committee's longstanding support, applaud the successes and breakthroughs this has made possible, and ask for your continued support of Federal funding of nursing education and research.

PREPARED STATEMENT

Senator CHILES. Thank you very much, doctor. And we thank you for your phone call. We want to tell you that we listened to what you had to say. We put the $18.75 million into the maternal and child health care block grant.

Dr. DREHER. We were very pleased to hear that and we thank you for your support.

Senator CHILES. Thank you, doctor.

[The statement follows:]

STATEMENT OF DR. MELANIE C. DREHER

Mr. Chairman, I am Melanie Dreher, Dean of the University of Miami School of Nursing. I appear on behalf of the American Association of Colleges of Nursing, representing 400 colleges and university schools of nursing; the American Nurses' Association, representing 188,000 nurses throughout 53 constituent state nurses' associations; the American Organization of Nurse Executives, representing over 4,000 nurse executives from health care institutions across the country; and the National League for Nursing, comprising 1,800 institutions and over 15,000 individual nurses, other health care educators and providers, and consumers. I am here today to gratefully acknowledge this committee's past support of nursing education and research, and to urgently request continued federal funding.

As you know, Mr. Chairman, we are in the midst of dramatic change in the American health care delivery system, brought about by the demographics of our aging population, ongoing advances in medical technology, sweeping reforms in health care financing, and the emergence of new settings and patterns of health care delivery.

The impact of these changes has pervaded our society. They have tremendous implications for nurses, who are the principal care givers for significant segments of our population, including the elderly, and the principal care givers in such non-acute delivery settings as the home and community; who comprise the largest group of health care providers in the nation's hospitals; and who often serve as patient advocates -- guiding consumers through an increasingly complex health care maze, and managing the services consumers receive from an ever more complicated array of providers.

The aging of our population poses a serious challenge to the health care system. The greatest health problems of the elderly are in the area of chronic illness, which by definition is never cured and which requires ongoing nursing care.

While nurses can provide appropriate and cost-effective care in the community and in the home that promotes maximum quality of life and independence for the majority of elder Americans, there will always be a segment, particularly among the fastest growing over-80 population, whose conditions have progressed so as to require nursing home care.

According to the 1986 Institute of Medicine (IOM) study, Improving the Quality of Care in Nursing Homes, the number of residents is projected to rise 68 percent between 1980 and 2000, and an additional 33 percent by the year 2020. This study indicted the poor quality of care provided in many of the nation's nursing homes -- and called for reforms that would require greatly increased registered nurse services in institutional long-term care facilities

In the hospital sector, the financial incentives under prospective payment to limit hospitalization and discharge patients earlier have resulted in a much more acutely ill patient census, requiring more intensive nursing care. And hospitals are competing head-on for nursing staff with a booming home care industry -- which is caring for the sicker patients discharged earlier from the hospital -- and with burgeoning ambulatory care and health maintenance organization markets.

The American Organization of Nurse Executives, in collaboration with the American Hospital Association, recently reported that the RN vacancy rate in hospitals around the country more than doubled last year, from 6.3 percent in 1985 to 13.6 percent in 1986, and the percentage of hospitals reporting no registered nurse vacancies fell from 35 percent to 17 percent.

In fact, all available data demonstrate that we have entered a period of chronic nursing shortage across the nation, the dimensions and duration of which will far surpass any nurse supply and demand aberrations we have experienced to date. During recent months, banner headlines in the media nationwide have graphically demonstrated the extent of the problem and the very real impact upon the health care consuming public.

All of this is occurring at a time when there are more nurses in the workforce than ever before. In 1977, there were 1.4 million registered nurses in the nation, 70 percent of whom were employed full time. By 1984, the number had grown to 1.9 million, with more than 79 percent in the workforce.

However, the demand just keeps growing and has been far outstripping supply. Annual survey data of the National League for Nursing provide cause for further worry. Enrollments in educational programs preparing registered nurses were down 8.1 percent in 1985, and preliminary analysis of 1986 data indicates an even deeper decline.

The question of whether any of us can count on a nurse being there when we, or our loved ones, need a nurse is very tangible. This is neither slogan nor hyperbole. Unless we strongly support nursing education and reverse the enrollment decline, we will face very serious problems in adequately meeting health care needs for many years to come. Unless we increase nursing supply in proportion to the projected demand for nursing care over the remainder of the century, the health and well-being of many of our citizens, especially the oldest and most vulnerable, are at very real risk.

The need is particularly acute, and the future supply and demand outlook especially critical, at the post-baccalaureate levels of preparation, on which current federal funding programs are focused.

The Department of Health and Human Services' Fifth Report to the President and Congress on the Status of Health Personnel in the United States presents a model for nursing supply and demand through the remainder of the century that projects a demand for 500,000 nurses prepared at the graduate level by the turn of the centry, and a supply of about 170,000.

Clearly, this is not a climate in which the health and welfare of the American public would be well served by the curtailment in federal support of nursing education proposed by the Administration. The impact of drastic funding cutbacks, which would stunt future supply, would fall most heavily on the segments of our population most in need. Furthermore, such cuts would be counterproductive, as numerous studies in recent years have demonstrated the cost savings to the health care system that accrue from effective utilization of nursing resources.

This committee has been supportive of nursing education and research in the past, and your support has been the lifeblood of nursing programs. On behalf of constituents throught the nation -- the vulnerable who will suffer most if there is no nurse in a time of need -- we urgently request your continued support for the following programs currently funded under the Public Health Service Act:

Advanced Nurse Education, which provides institutional support to collegiate schools for the preparation of nurses at the master's or doctoral level. Projects recently funded address the need for programs to prepare nurse managers; nurse educators and clinical researchers; nurse specialists in such areas as gerontology, maternal and child health, and home health care; and nurses to provide health care in underserved rural areas. For example, advanced nurse education funds support the preparation of maternal and child health clinical nurse specialists at Boston College, and the preparation of pediatric clinical nurse specialists at Yale University in Connecticut.

Nurse Practitioner funding supports programs for the education of nurse practitioners and nurse-midwives, whom the recently released Office of Technology Assessment analysis found to provide cost-effective, high quality care, while improving access in underserved areas. Special consideration is given to programs that focus on the care of geriatric and nursing home populations. Examples of funded projects include the family nurse practitioner and nurse midwifery programs at the Frontier Nursing Service in Kentucky, and a program at the University of North Dakota to place graduates in underserved rural areas.

Special Project grants and contracts are awarded to support innovative approaches to increasing nursing education opportunities for individuals from disadvantaged backgrounds, providing continuing education for nurses, providing retraining opportunities for nurses who are returning to the workforce, and increasing supply or improving distribution of nurses by geographic area and specialty. Examples of current projects include a continuing education program in ethical decision-making for nurse executives, at George Mason University in Virginia; a program at Morehead State University in Kentucky on understanding and counseling dying patients; a program at the University of Massachusetts on meeting the needs of the well elderly; and a project at the University of Hawaii to reach out to the disadvantaged student.

Professional Traineeships are provided to individual nursing students at the graduate level for advanced preparation to teach, serve in an administrative capacity, o~ work as a nurse practitioner or in a specialty area. Without these traineeships, many individuals would be forced either to abandon their education or study on a part-time basis, delaying their much needed entry into the workforce.

Nurse Anesthetist grants support improvement of existing programs for educating nurse anesthetists, 70 percent of whose services are delivered in rural areas. Included are grants providing financial assistance to certified registered nurse anesthetists who are faculty members, to enable them to obtain advanced education relevant to their teaching roles.

Demonstration Project grants and contracts support collaborative nursing education and practice programs in a variety of health care settings, programs that improve access to nursing services in the community, and programs that encourage geographic and specialty distribution of nurses. Examples of innovative demonstration projects currently funded include a program at the University of Kentucky to increase delivery of health care services to the homeless through a nurse-managed clinic associated with the Salvation Army, and an Ohio Department of Health program through which nurses deliver care to incarcerated adolescents.

The Faculty Fellowship program is designed to enable schools of nursing to award post-baccalaureate fellowships that will allow faculty to investigate cost-effective health care alternatives, with a special focus on such at-risk populations as the elderly, premature infants, the physically and mentally disabled, and ethnic and minority groups.

Numerous studies in recent years have identified a shortage of nurse researchers and recommended increasing federal support for nursing research, including the 1985 IOM Report on the Personnel Needs and Training for Biomedical and Behavioral Research and the previously cited Fifth Report on health personnel status. Nursing research projects, administered through the new National Center for Nursing Research at the National Institutes of Health, address major patient care issues and have significant implications for the cost-effective delivery of quality health care services to the American public. The majority of current projects focus on high risk populations, the chronically ill, the disabled, and the dying. National Research Service

Awards provide grants to nurse investigators in support of pre- and post-doctoral fellowships. Examples of nursing research projects now funded include:

*An investigation of patterns and factors influencing acute confusion in hospitalized elderly patients, at the University of North Carolina;

*A project looking at the adaptation of the frail elderly and their care givers, at the Catholic University of America in Washington, D.C.;

*Research at the University of Florida on the effects of exercise on labor and delivery and on factors that contribute to successful parenting;

*A study of self-breast examination by older women, at Indiana University;

*An analysis of health care cost containment and nursing utilization being conducted at the University of Michigan; and

*An investigation of pediatric pain development underway at the University of California-San Francisco.

Clearly, these are scientific endeavors that promise improved knowledge and methodology in regard to the delivery of health care to populations at-risk and in need. We urge the continued support of this committee for vital nursing research that will enable the provision of the best and most cost-effective care. Indeed, an increase in support of nursing research would constitute a prudent, humane, and fiscally sound investment in the future health status of the American public.

Mr. Chairman, the past support of this committee has promoted the viability of nursing education and research programs. We are in the throes of a nursing shortage, most acute at the advanced and specialized levels of preparation, which poses a long-range threat to our nation's health. Curtailment of federal funding under such circumstances would jeopardize each of us and our loved ones. This would, in reality, prove far more costly to the nation in human and economic terms in the long run.

We sincerely appreciate this committee's long-standing support for nursing education and research, applaud the successes and breakthroughs made possible by your support, and ask for your continued support of federal funding of nursing education and research. Thank you.

STATEMENT OF HARRY TETER, JR., DIRECTOR, ATLANTIC EMERGENCY MEDICAL SERVICES COUNCIL

Senator CHILES. Now we will hear from the Centers for Disease Control. R. Adams Cowley, the director of the National Study Center for Trauma and Emergency Medical Systems.

Mr. TETER. Mr. Chairman, I am Harry Teter, your next witness. I am a friend of Dr. Cowley's. Our comments are almost the same in this regard. We have both submitted statements for the record.

Dr. Cowley has been detained in Baltimore at the shock trauma center this morning, and sends his deep regrets that he could not be here. If I may——

Senator CHILES. Are you sort of testifying for him?

Mr. TETER. Yes, sir; as well as for the Atlantic Emergency Medical Services Council.

As I say my name is Harry Teter. I am counsel to the Atlantic Emergency Medical Services Council. I also work with several other organizations involved in fighting the disease of trauma.

As you I am sure are aware, trauma is one of the major problems we face in the health world today. In every State, including Florida, we have major problems in rescuing and saving the victims of trauma and taking them to the proper care centers.

The program at the Centers for Disease Control is vitally important in helping us to learn more about better ways to fight trauma. Better ways to treat the injured victim. Last year over $100 million was lost due to trauma. This involves both loss of wages, loss of property, as well as direct costs of treating the trauma victim.

Over 100,000 people were killed, and over 2 million people suffered life-threatening injuries needing emergency medical services systems. This is a major problem in this country. We know how to treat trauma. Two ways.

We can prevent it. Or we can have emergency medical services systems in place to properly care for the victims. We are fighting on both fronts, and I think we must continue that fight on both fronts, because we are not going to reduce these staggering and horrifying figures until we have succeeded. And, hopefully, we in the emergency medical services world someday may be out of business.

But until we learn to prevent accidents, prevent injuries, then we better have good systems of care there. That is why we are arguing strongly for the full appropriations for the preventive health care block grant.

Now those dollars that are in that grant are vital to help us. We have urged the Congress before, and although I know it is not within the jurisdiction necessarily of this committee, I do repeat it. There are unnecessary restrictions in the block grant with regard to the purchase of equipment for our systems. And I urge you to recommend that they be lifted.

The General Accounting Office has recently done a study on this whole problem, and has made that one of their four major recommendations. It just makes no sense that we cannot buy needed communications equipment, needed training equipment for our EMT's, et cetera.

The problems, as I say, are getting larger in this area. This is the major killer of our youth, and also now is a rising problem with our elderly. It strikes everyone. It strikes when you least expect it, and without emergency medical services systems there to care for the person, they may die unnecessarily.

PREPARED STATEMENTS

We urge your help. We thank you for the help of the past. And we are right back asking for more for the future.

Senator CHILES. Thank you very much.

[The statements follow:]

STATEMENT OF HARRY TETER, JR.

Mr. Chairman, on behalf of the Atlantic EMS Council I appreciate the opportunity to appear before you today to testify in support of full appropriations for the Preventive Health and Health Services Block Grant. The Council is composed of the EMS state representatives from New Jersey, Pennsylvania, Maryland, Delaware, District of Columbis, West Virginia and Virginia and is primarily responsible for the development and delivery of EMS throughout the Mid-Atlantic Region. This region has the most advanced EMS systems in the nation. We have experienced the national thrust for EMS development during the 1973-1981 era when the Federal EMS initiative was directed by the HHS categorical program. During that time systems were aggressively developed. After 1981 when the Federal initiative was channelled through the PH&HS Block Grant this strong Federal focus diminished.

The Atlantic Council, at its meeting on April 6th., discussed the need and effectiveness of the block grant. No one realistically expects that all the dollars necessary to make every EMS system function optimally can be available from any one source. EMS is a responsibility of many parties and government at all levels, Federal, State and Local. What must be born in mind is that each party including the Federal government, does have a clearly defined stake in providing viable EMS to its constituents. The Federal dollars, combined with dollars from other sources, are critical to systems development and maintenance. The Council members strongly request that these dollars be maintained and increased.

No single program within any block grant addresses a problem of the magnitude and seriousness that EMS does. EMS must respond to over 2½ million life-threatening incidents every year. These incidents will involve persons of all ages. Many will die (last year over 100,000). Of these over half are between the ages of 1-40. Trauma is the disease of the young, is the leading cause of death of those under 40. Last year the costs associated with trauma exceeded $100 billion. No other program has statistics comparable to these. With EMS systems, these numbers can be dramatically reduced. Systems work but they require money. The Council strongly recommends that 20% of the block grant funds, or the same percentage of the block as received by EMS from a state in its fiscal year 1987 allocation whichever is more, be devoted to EMS.

We have been involved with the delivery of EMS for many years. We have experienced the frustration of knowing that with adequate funding of our systems many lives could be saved which are now lost. The devasting result of injuries could be mitigated. EMS providers need the physical infrastructure of a system - training tools, ambulances, communications equipment and properly dedicated facilities. Accordingly, we request that this committee lift the restrictions of purchase of equipment. This request is consistent with the recommendations of the GAO in its report entitled " Health Care - States Assumed Leadership Role in Providing Emergency Medical Services".

Ideally, injuries should be prevented and indeed much progress has been made in this direction. However, the reality of the situation is that injuries will never be completely eliminated and a solid EMS network is essential to preserve the lives and productivity of our citizens.

STATEMENT OF R. ADAMS COWLEY, M.D., DIRECTOR, CHARLES McC MATHIAS NATIONAL STUDY CENTER AND EMERGENCY MEDICAL SYSTEMS

Mr. Chairman, and members of the Committee, I am R Adams Cowley, Director of the Charles McC Mathias Study Center for Trauma and Emergency Medical Systems. I feel a special senas of pride testifying today on behalf of the Study Center which was recently designated by Congress to serve as a resource center for information and data, and to provide technical assistance concerning emergency medical systems. Mr. Chairman, we apprecaite this recognition and look forward to presenting our findings on a regular basis to Congress.

According to statistical data compiled by the Study Center we find ourselves presented by something of a mixed bag concerning Trauma and EMS in the United States. Despite increased Federal and state efforts targeting prevention, the incidents of traumatic injury are increasing. This is not tosay that seatbelt promotion , drunk driving advertising and other preventive measures have been ineffective. On the contrary, these initiatives have done much to slow the pace of this increase in injuries. The fact remains , however, that there must be a viable remedial component to complement preventive efforts. This remedial, or "post event" component is a sound system of emergency medical services. In those areas of the country where EMS systems are operating effectively, more victims of trauma are living who would otherwise died, and more are returning to mormal productive lives who would have been wards of thestate or wholly dependent on their families.

The potential for providing for the cure to the greatest killer of young people under the age of 40, and for reversing the possible permanent disabilities (which now accounts for an annual loss of over $100 billion) lies in emergency medical service providers' ability to advance technologically, upgrade equipment and establish networks.

All evidence suggests that the most effective EMS delivery is based on a systems approach. Systems are necessarily complex. Among the various components of properly functioning emergency medical services systems are:

> Trained emergency medical technicians and medical control of the care from the scene of the accident to the arrival at the care facility;
>
> Properly equipped ambulances, helicopters and/or fixed winged aircraft;
>
> Communications equipment and dedicated air channels;
>
> Medical facilities capable of instant response.

Each component has subcomponents and all must be intregrated and properly coordinated. With a system in place a trauma victim's chances for survival and a productive life vastly improve.

Unfortunately, EMS in this country is faced with a number of problems. First, not all areas of the United States have comprehensive EMS systems at their disposal. Second, many that do have such systems, are unable to expand, keep up technologically, or upgrade equipment because of significant funding cuts since 1981 and restrictions placed on the use of those funds. When the Federal categorical EMS program was abolished and activities were folded in the Public Health and Health Services Block Grant, local EMS entities fared poorly in competing for block grant funds. Although the situation has improved somewhat, many local providers of emergency medical services continue to experience cutbacks as funds are filtered down to them. This program is exacerbated by a rise in umcompensated care which has forced a number of trauma centers to close.

The Study Center believes that a mechanism to ensure that local and state EMS providers would receive atleast a certain percent of block grant funds allocated to each state would help curb a rapidly deterioratine situation. Additionally we agree with the recent GAO study which suggests lifting the restrictions on EMS equipment purchase with block grant funds.

Mr. Chairman, a renewed federal focus on EMS is desparately needed. As Senator Cranston pointed out in introducing the Emergency Medical Services and Trauma Care Improvement Act (S-10) in January of 1987, the goal of preventing serious injuries is within our grasp if the Congress places a priority on that goal.

Thank you for giving us the opportunity of appearing before you today.

STATEMENT OF ALAN C. DAVIS, CHAIRMAN, COALITION ON SMOKING OR HEALTH

Senator CHILES. Now we will hear from Alan C. Davis, of the Coalition on Smoking OR Health.

Mr. DAVIS. Thank you, Mr. Chairman. My name is Alan Davis. I am vice president for public affairs and science editor of the American Cancer Society.

I appear before you today as the chairman of the steering committee of the Coalition on Smoking OR Health. The Coalition on Smoking OR Health was formed by the American Heart Association, the American Lung Association, and the American Cancer Society 5 years ago to bring the health hazards of cigarette smoking more effectively to the attention of Federal legislators and other public officials.

We are pleased to appear before your subcommittee today to make our funding recommendations for the Federal Office on Smoking and Health. The President's fiscal year 1988 budget includes a level of funding request of $3.466 million and 18 full-time equivalent physicians for OSH.

We do not believe that this is sufficient for the OSH to carry out all of its current and newly mandated functions. Therefore, we recommend that the office receive a fiscal year 1988 appropriation of $5 million and that they receive an FTE increase of eight positions. We believe that this increase for the office is fiscally responsible and desperately needed for the following reasons.

One, tobacco continues to cost our society tens of billions of dollars annually in health care and lost productivity costs. Reducing tobacco consumption is cost effective as well as responsible public health policy.

Two, new responsibilities have been assigned to the OSH and new educational efforts directed at protecting nonsmokers are needed in the light of findings of the 1986 Surgeon General's report on the health consequences of involuntary smoking.

Three, the Federal Government currently spends $5 million annually on a fruitless program to develop a so-called safe cigarette. This scientifically impossible project could be abolished with no injury to the public health, thereby more than offsetting an increase in the budget for the OSH.

And four, when one takes into account the staggering fact that the tobacco industry spends more than $2 billion annually on advertising its product, it becomes obvious that even the combined resources of the OSH and the voluntary health organizations they represent are in no way sufficient to fully counteract the sophisticated advertising techniques employed by the industry to entice individuals to be——

Senator CHILES. How much would you say that we spend from all sources in advertising to counteract smoking, in addition to Government funds?

Mr. DAVIS. I would say probably around $100 million. That includes a lot of research effort that goes, which is indirect but directed eventually toward the same objective.

The public health problems encompassed by the OSH mandate are enormous. The office does not attempt to tackle these problems alone. We in the voluntary health sector take a very active role in educating the public regarding the health hazards of cigarette smoking and smokeless tobacco use.

However, the OSH's role is critical. And that is why our organizations and others involved in smoking control efforts are deeply concerned that the OSH's move to the Centers for Disease Control earlier this year might result in a possible diminishment of its importance in the Federal public health effort.

We sincerely hope that this is not the case, as tobacco use remains the single most preventable cause of death in our Nation, killing more people every year than cocaine, heroin, alcohol, automobile accidents, fire, homicide, suicide, and AIDS combined.

The Coalition on Smoking OR Health and its member organizations believe that without the many functions performed by the Office of Smoking and Health, the effort to educate the American public and the rest of the world about the health hazards associated with smoking would be far behind where it is today.

The annual Surgeon General's report, the collection and dissemination of smoking and health research, the public health education activities and programs developed and implemented by OSH have added immeasurably to the gains that have been made in reducing the single most preventable cause of death in the United States, cigarette smoking.

The impact of the OSH's move to CDC is something we will continue to monitor closely. As in human and financial terms, as we cannot afford to have the OSH's impact limited by bureaucratic restructurings.

PREPARED STATEMENT

I am here today on behalf of the Coalition on Smoking OR Health to urge the subcommittee to provide adequate funding for this small but most effective Federal office. Hundreds of thousands of lives are depending upon it. Thank you.

Senator CHILES. Thank you very much.

[The statement follows:]

STATEMENT OF ALAN C. DAVIS

My name is Alan Davis and I am Vice President for Public Affairs and Science Editor for the American Cancer Society. I appear before you today as the Chairman of the Steering Committee of the Coalition on Smoking OR Health. The Coalition on Smoking OR Health was formed by the American Heart Association (AHA), the American Lung Association (ALA), and the American Cancer Society (ACS) five years ago to bring the health hazards of cigarette smoking more effectively to the attention of Federal legislators and other public officials. We are pleased to appear before your Subcommittee today to make our funding recommendations for the Federal Office on Smoking and Health (OSH).

The President's FY88 budget includes a level funding request of $3.466 million and 18 FTE positions for the OSH. We do not believe that this is sufficient for the OSH to carry out all of its current and newly-mandated functions. Therefore, we recommend that the Office receive an FY88 appropriation of $5 million and that they receive an FTE increase of 8 positions. We believe this increase for the Office is fiscally responsible and desperately needed for the following reasons:

1. Tobacco use continues to cost our society tens of billions of dollars annually in health care and lost productivity costs. Reducing tobacco consumption is cost-effective as well as responsible public health policy.
2. New responsibilities have been assigned to the OSH, and new educational efforts directed at protecting non-smokers are needed in light of the findings of the 1986 Surgeon General's Report on the health consequences of involuntary smoking.
3. The Federal government currently spends $5 million annually on a fruitless program to develop a so-called "safe cigarette." This scientifically impossible project could be abolished at no injury to the public health, thereby more than off-setting an increase in the budget of OSH.
4. When one takes into account the staggering fact that the tobacco industry spends more than $2 billion annually on advertising its products, it becomes obvious that even the combined resources of the OSH and the voluntary health organizations I represent are not sufficient to fully counteract the sophisticated advertising techniques employed by the industry to entice individuals to begin or continue smoking.

Cigarette smoking is the number one preventable cause of death and disability in the United States. Smoking causes 83 percent of all lung cancer deaths, and is a significant contributing factor in a number of other cancers. Cigarette smoking is a major risk factor in the development of cardiovascular disease and causes one-third of all heart disease deaths. Smoking is a major cause of emphysema and chronic bronchitis and causes 80 - 90 percent of all deaths from these diseases in the United States. According to the Office of Technology Assessment (OTA) smoking-related health care and lost productivity costs amount to approximately $65 billion annually, including more than $4 billion annually in Medicare and Medicaid payments.

Use of smokeless tobacco products - - snuff and chewing tobacco -- is also a serious health problem. The 1986 Report of the Advisory Committee to the Surgeon General on the Health Consequences of Using Smokeless Tobacco found that approximately 12 million Americans now use smokeless tobacco, including 16% of young males between 12 and 25 years of age. The Surgeon General's Report concludes that use of smokeless tobacco can cause oral cancer, and also may result in as variety of other problems including tooth loss and nicotine dependency.

The public health problems encompassed by the OSH mandate are enormous. The Office does not attempt to tackle these problems alone; we in the voluntary health sector take a very active role in educating the public regarding the health hazards of cigarette smoking and smokeless tobacco use. However, the OSH's role is critical and that is why our organizations and others involved in smoking control efforts were deeply concerned that OSH's move to CDC earlier this year might result in a possible diminishment of its importance in the Federal public health effort. We sincerely hope this is not the case, as tobacco use remains the single most preventable cause of death in our nation, killing more people every year than cocaine, heroin, alcohol, automobile accidents, fire, homicide, suicide and AIDS combined.

I would now like to provide the Subcommittee with a description of the many activities of the OSH.

Science and Technical Information

The OSH Technical Information Center (TIC) is the world's largest repository of current research in smoking and health. The TIC regularly disseminates information to over 5,000 researchers and health professionals. The TIC is the only international clearninghouse for scientific information on smoking and health.

The major publication of the OSH is the Annual Surgeon General's Report on the health consequences of smoking. This document is recognized throughout the world as the premier publication on current issues in smoking and health research.

Public Information and Education

The OSH's public information activities about cigarette smoking have been very successful. A recent evaluation found that OSH Public Service Announcements (PSAs) aired an average of 25.8 times per month and over 64 percent of these spots were aired during peak viewing times. The value of this air time is in excess of $10 million. The OSH is also responsible for the development of educational programs and materials about smokeless tobacco use.

Regulatory and Reporting Activities

The regulatory and reporting activities of the OSH are its newest areas of responsibility. The Comprehensive Smoking Education Act of 1984 (P.L. 98-474) statutorily establishes the OSH, and requires the Office to staff the Interagency Committee on Smoking and Health, including the preparation of a biennial report to Congress on the activities of the OSH, the private sector, and about the efforts undertaken by each to inform the public of the health hazards of smoking. The first of these biennial reports, entitled Smoking and Health: A National Status Report, was issued last November.

PL98-474 also requires the Office to compile and report on cigarette ingredients information to be supplied to the DHHS by cigarette manufacturers. Similarly, the Comprehensive Smokeless Tobacco Health Education Act of 1986 (P.L. 99-252) requires the OSH to collect and report on additives in smokeless tobacco products, and report to Congress about research and educational activities related to smokeless tobacco use.

Effectiveness of the OSH

The Coalition on Smoking OR Health and its member organizations believe that without the many functions performed by the OSH, the effort to educate the American public and the rest of the world about the health hazards associated with smoking would be far behind where it is today. The annual Surgeon General's reports, the collection and dissemination of smoking and health research, and the public health education activities and programs developed and implemented by OSH have added immeasurably to the gains that have been made in reducing the single most preventable cause of death in the United States: cigarette smoking. The impact of the OSH's move to CDC is something we will continue to monitor closely, as in human and financial terms as we cannot afford to have the OSH's impact limited by bureaucratic restructurings. I am here today, on behalf of the Coalition on Smoking OR Health, to urge the Subcommittee to provide adequate funding for this small but most effective Federal office. Hundreds of thousands of lives are depending upon it.

STATEMENT OF WENDY WERTHEIMER, DIRECTOR OF PUBLIC AND GOVERNMENT AFFAIRS, AMERICAN SOCIAL HEALTH ASSOCIATION

Senator CHILES. Now we will hear from Wendy Wertheimer of the American Social Health Association.

Ms. WERTHEIMER. Good morning, Mr. Chairman. I will dispense with the niceties and just begin by saying that efforts in this country to control sexually transmitted diseases have been totally decimated in the last few years.

No State demonstrates that failure more graphically than the State of Florida, which I am sure you know. Charts at the back of my testimony demonstrate that fact very clearly.

Since 1981 the STD Control Program has been subjected to a proposed block grant, cuts in funds, reprogramming of funds, the Gramm-Rudman sequestration, a hiring freeze, and the direct diversion of funds, resources, and personnel for AIDS.

This year we successfully, Congress rejected another reprogramming. However, reprogramming is currently being discussed. Another block grant proposal has been brought forward. And the President's budget asks an unbelievable $4 million cut from this program.

The result is that since 1980 there has been a thirtyfold increase in cases of gonorrhea resistant to penicillin. Every year since 1983 congenital syphilis has increased. Seven hundred thousand women have been left infertile since 1981 from STD's.

Almost 500,000 ectopic pregnancies have taken place. Now that is the death of the fetus, and significant risk to the mother. Ectopic pregnancy is now a leading cause of maternal death in this country.

Each year 14 million Americans are affected by an STD. These are not benign diseases. Women are left sterile. They can be passed to babies where they are life-threatening. They are associated with genital cancers. They can lead to miscarriages and stillbirth.

Billions and billions of dollars are the cost of these diseases each year. The STD Control Program has virtually become a slush fund for

AIDS. This is not to take away from any money deserving to AIDS. However, it cannot be at the expense of other sexually transmitted diseases.

A new study in Africa has shown that an infection with an STD may, in fact, enhance your chance of getting AIDS, which makes sense. All sorts of forms of sexually transmitted disease can allow the AIDS virus to get into the bloodstream more easily. Secretions from STD's could also enhance the ability of AIDS to get into the bloodstream.

Thus, what are we doing by taking money away from sexually transmitted disease control, when, in fact, what we might be doing is not only furthering sexually transmitted diseases but even helping along a horrible epidemic of AIDS.

It may be that if we were keeping other sexually transmitted diseases under control, and certainly if we were educating the public about the other sexually transmitted diseases, we could, in fact, also be preventing many cases of AIDS.

The policy we are currently following is dangerous, it is shortsighted, and I would say even malevolent. We are forfeiting the lives and the health of millions of Americans in the name of budget deficits and a distorted sense of morality. What could be more immoral than deliberately choosing to ignore diseases that affect millions of Americans, which in many cases could be prevented. And we are not doing that prevention.

As you know, Mr. Chairman, we have to reauthorize this program, and we are crossing our fingers that that will take place soon. Congressman Waxman will be probably doubling the authorization level to allow for a control program for chlamydia, a disease that affects 4 million people each year, and which Dr. Mason at CDC has estimated would cost $50 million a year to initiate control programs nationwide.

PREPARED STATEMENT

We have always counted on Congress to take the lead in these diseases. And we hope that we can once again look forward to your support.

Senator CHILES. Thank you. Thank you for your testimony.

[The statement follows:]

STATEMENT OF WENDY WERTHEIMER

Mr. Chairman, I am Wendy Wertheimer, Director of Public and Government Affairs of the American Social Health Association, one of the oldest non-profit organizations in the United States. Among our programs are the National AIDS Hotline, the National VD Hotline, the Herpes Resource Center, the Sexually Transmitted Diseases Research Fund, and a number of public, professional and school-based education programs. I am pleased to speak to you today about the Sexually Transmitted Diseases program of the Centers for Disease Control.

Let's look at what has occurred in sexually transmitted diseases in the past few years:

* Since 1980 the incidence of antibiotic resistant gonorrhea has increased 30-fold.
* Since 1983 cases of reported congenital syphilis have increased each year.
* Since 1981 almost 700,000 women have been left infertile from STDs.
* Since 1981 more than 400,000 ectopic pregnancies have occurred.
* As many as 500,000 new cases of herpes have occurred each year; and more than 1 million people each year seek medical assistance for human papillomavirus infections.
* This year alone, more than 14 million Americans will contract a sexually transmitted disease.

Now let's look at how the Administration has responded to these epidemics. Since 1981 the Sexually Transmitted Disease program has been subjected to a proposed block grant, cuts in funds, reprogramming of funds, the Gramm-Rudman sequestration, a hiring freeze, and the direct diversion of funds and personnel to AIDS activities. This year there was another reprogramming request, another block grant has been proposed, yet another reprogramming request is being prepared, and the President's FY 1988 budget requests nearly a $4 million cut in funds.

Syphilis and Gonorrhea

As a result, the nation's ability to prevent sexually transmitted diseases and their consequences has been crippled. We have even lost ground on some of the successes of the past in basic STD control. Syphilis in women has increased in the past year, and congenital syphilis cases have increased each year since 1983, although cases in men have declined. Gonorrhea is still the most common reportable disease in the United States, with about one million new cases reported each year. Furthermore, since the late 1970s cases of antibiotic resistant gonorrhea have increased almost 30-fold, and have increased 90% in just the past year.

Complications of Infection

As sexually transmitted diseases increase so too do the serious complications they cause, particularly among women. Scarring of the Fallopian tubes can result in tubal (ectopic) pregnancy and infertility. Each such pregnancy represents the loss of a fetus and can be life-threatening to the mother, making ectopic pregnancy one of the leading causes of death among black women. More than 110,000 women each year are rendered sterile by sexually transmitted diseases, and almost 2 million couples each year seek infertility services. Every case of sterility caused by STD could have been prevented if the disease had been diagnosed and treated.

Infants suffer the consequences of sexually transmitted diseases when passed from an infected mother during birth or when the baby is still in the uterus. Syphilis can kill a baby. Fifty percent of babies infected with herpes at birth will die. Chlamydia, when passed on to a baby, can lead to pneumonia and is the leading cause of eye infection in newborns. Human papillomavirus infections may result in life-threatening obstructions of the upper airway.

Viral Diseases

Since 1972 the CDC STD control program has focused on syphilis and gonorrhea, diseases which can be easily diagnosed, fairly inexpensively treated, and which have a relatively short incubation period allowing for contact tracing of sexual partners. These diseases are not, however, the most prevalent sexually transmitted diseases today. In fact, far from it. Sexually transmitted viruses are now the major public health threat, and they are taxing and challenging the traditional public health methods. The two most prevalent are herpes simplex and human papillomaviruses. CDC devotes about $900,000 of its in-house funds to these two diseases, but virtually none of the funds allocated to the states is spent on these diseases.

Anywhere from 20 to 40 million Americans have herpes infections. New studies have shown that it is possible to have herpes and transmit the infection without having any symptoms of the disease, including at the time of childbirth. Human papillomavirus, or HPV, is probably more prevalent than herpes, but there is much more we need to learn about it. HPV has been strongly suspected in the development of genital cancers, and we presently lack any effective means of testing for its presence let alone treating it.

AIDS

AIDS is the viral STD of greatest concern, and it has placed extraordinary demands on public health services. At the federal level, millions of dollars appropriated for sexually transmitted disease control have been redirected to AIDS. At least 45 FTEs have been reassigned from STDs to AIDS, and they have not been replaced. Those who remain in the STD program devote large amounts of time to AIDS. At the state level, some STD field staff spend the majority of their time on AIDS; and clinic personnel are responsible for HIV testing, counselling, follow-up and education. These additional duties, without additional staff or funding have crippled STD control efforts and prevented any new initiatives in STD prevention or education.

Chlamydia

More than 4 million Americans each year are infected with chlamydia, a largely unappreciated epidemic. Diagnostic tests have recently become available, but few physicians screen for the disease and it is frequently treated inappropriately. Several states have begun chlamydia control initiatives, but have done so with no new funds or personnel.

Dr. Mason testified before Congressman Waxman's subcommittee last year that a national chlamydia control program would cost between $50 and $60 million. Yet the Administration has requested a $4 million cut in funds. Chlamydia is both treatable and preventable, and the consequences of infection are far more expensive than prevention. Recent studies have shown that chlamydial infections cost society more than $1.4 billion each year, and pelvic inflammatory disease, a consequence of STD costs $2.6 billion each year. If this Administration is truly interested in keeping down costs, it could make no better investment than in programs to prevent chlamydia. Many people today talk about immorality. What could be more immoral than deliberately ignoring a disease affecting millions of Americans which can be treated and prevented?

Public Education

This year the STD control program will fund only two projects for STD public education--the VD National Hotline and a continuation grant. Since 1979 CDC has funded no nation-wide initiatives for public education. Although state programs carry out some public education, there is no uniformity of effort and little or no accountability or evaluation. Had strong leadership been given to STD education all along, with appropriate funding, we would have had the mechanisms, expertise, and public support in place to carry out AIDS education, and probably would have prevented many cases of AIDS.

STDs as Possible Co-Factors in AIDS

Mr. Chairman, a few studies have been conducted to investigate the possibility that infection with an STD may enhance the possibility of contracting AIDS. It is thought that ulcerative infection may provide a pathway into the body for the AIDS virus, and that other STDs may also facilitate the transmission of AIDS through secretions. Not nearly enough attention has been focused on this possibility, but studies of heterosexual transmission in Africa indicate that existing sexually transmitted disease may indeed play a role. Thus, consider the implications of our current policy of focusing all of our attention on AIDS while taking funds and resources away from other sexually transmitted diseases. It is altogether likely that by preventing sexually transmitted diseases we could also prevent transmission of AIDS. But current policy is resulting not only in massive increases in sexually transmitted diseases, but possibly even furthering the spread of AIDS. I would call this policy dangerous, short-sighted, and even malevolent. To continue using the STD program as a limitless slush fund for AIDS activities will bankrupt STD control, and does a disservice to both AIDS and STD efforts.

Reauthorization

As you know, the STD program must be reauthorized this year. We hope that the process will be complete in time for appropriations, and that the legislation will provide a categorical program separating AIDS and STD authorities, and providing significantly increased authorization levels to allow for a major initiative in chlamydia control.

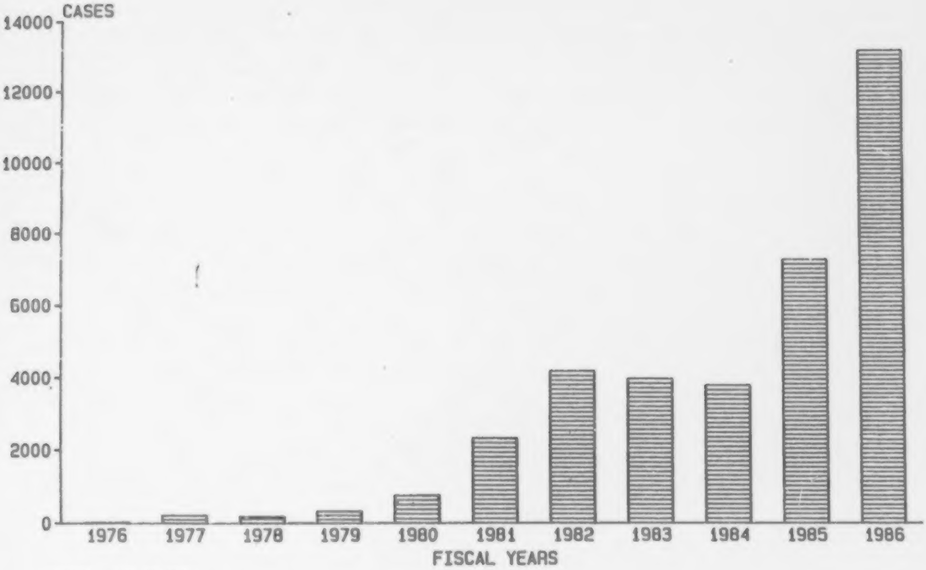
Mr. Chairman, AIDS is a crystallization of the worst problems of sexually transmitted diseases which are also associated with cancers, can be transmitted asymptomatically, can be transmitted to babies, and can be fatal. Society and the government have historically ignored the problem of sexually transmitted diseases hoping it would just go away and blaming people who got the diseases for suffering the consequences of their own actions.

Sexually transmitted diseases other than AIDS have been totally lost in the shuffle. To focus attention exclusively on AIDS without recognizing that AIDS is just the tip of the iceberg of a raging problem of sexually transmitted diseases in this country is not just bad policy, it is a deadly one. We are forfeiting the health of millions of Americans in the name of budget deficits and a distorted sense of "morality".

The STD Control program of the Centers for Disease Control has persevered under the most impossible of pressures and deserves tremendous credit for what it has been able to accomplish. But we have lost control of the epidemics of sexually transmitted diseases in this country. It is critical that funds be made available to allow chlamydia control programs in every state. Without a large infusion of funds to replace the millions of dollars the STD program has contributed to AIDS activities as well as to provide new initiatives in disease prevention and education, the consequences will be dire.

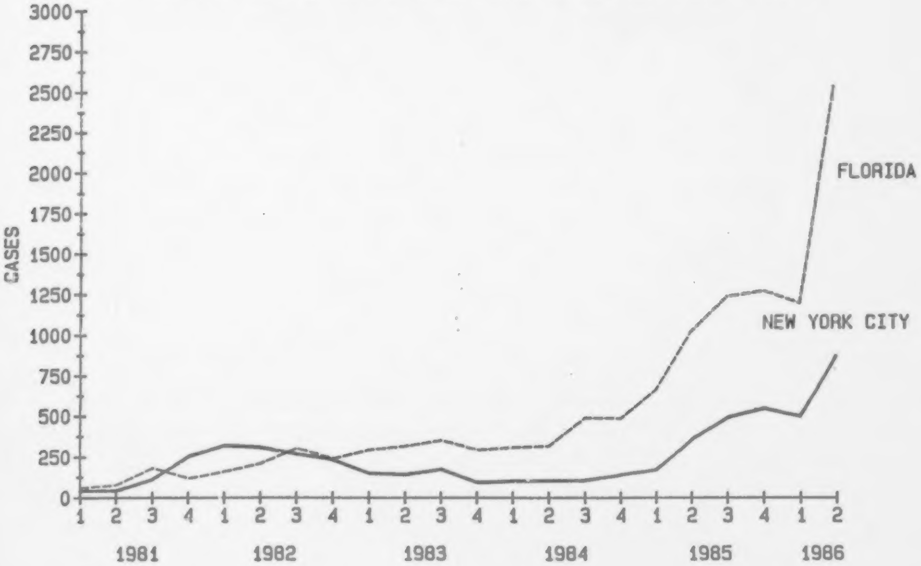
We are grateful for this Committee's past support for STD control efforts, and hope that this year we can again count on your support to give the STD program a viable chance to do its job with adquate funds and manpower. Thank you for this opportunity to express our views.

FIGURE 11: RESISTANT STRAINS OF GONORRHEA
UNITED STATES, FISCAL YEARS 1976 - 1986



SOURCE: CDC 73.688

FIGURE 12: RESISTANT STRAINS OF GONORRHEA
QUARTERLY MORBIDITY - U. S. EPIDEMIC AREAS
CALENDAR YEARS 1981-1985 AND JANUARY-JUNE 1986



Epidemiologic Notes and Reports

Penicillinase-Producing *Neisseria gonorrhoeae* — United States, 1986

In 1986, 16,608 cases of infection caused by penicillinase-producing *Neisseria gonorrhoeae* (PPNG) were reported to CDC. This represented 1.8% of all reported gonorrhea and was a 90% increase over the 8,724 cases reported in 1985. PPNG incidence has risen fourfold since 1984. Sixty-four percent of cases in 1986 occurred in the three areas previously identified as hyperendemic—Florida, New York City, and Los Angeles (*1*).

New York City experienced the greatest proportional increase of PPNG incidence despite its policy of treating all patients diagnosed with gonorrhea in the public clinics with antimicrobials effective against PPNG. In 1986, 3,986 cases were reported, compared with the 1,567 cases reported in 1985—a 154% increase. The proportion of total gonorrhea attributable to PPNG was 4.3%. Outbreaks have been identified in suburban areas of New York City located on Long Island and in New Jersey and Westchester County.

In Florida, 5,629 PPNG cases were reported—34% of the national total. In Dade County (Miami), Florida, the most severely affected county in the country, reported cases of PPNG increased from 2,455 in 1985 to 2,648 in 1986—an 8% increase. In 1986, the proportion of total gonorrhea attributable to PPNG in Dade County was 22%. Excluding Dade County, reported cases in Florida increased from 1,710 in 1985 to 2,981 in 1986—a 74% increase. The number of counties in Florida reporting hyperendemic PPNG (a proportion of PPNG >3%) rose from 16 counties in 1985 to 31 counties in 1986. These counties contain 69% of the state's population.

In Los Angeles, the number of cases increased from 488 in 1985 to 942 in 1986—a 93% increase. Another center of PPNG activity, probably representing secondary spread, has also been identified in suburban Orange County.

Reported by J Hill, J Witte, MD, J Wroten, MH Wilder, MD, Acting State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs; S Fannin, MD, Los Angeles Health Dept; S Joseph, MD, J Miles, S Schultz, MD, New York City Health Dept; Div of Sexually Transmitted Diseases, Center for Prevention Svcs, CDC.

Editorial Note: The incidence of antibiotic-resistant gonorrhea, and PPNG in particular, continues to increase and is spreading to previously unaffected areas. In earlier PPNG outbreaks, travel to PPNG endemic areas and prostitute contact were cited as risk factors for infection (*2*). While these factors may play an important role in the spread of PPNG disease to areas previously free of disease, once PPNG becomes endemic, it has the same epidemiologic characteristics as endemic, antibiotic-sensitive gonorrhea. PPNG patients have been predominantly inner-city residents, members of ethnic minority groups, and heterosexuals. Although high-risk groups for gonorrhea have included homosexual men, PPNG outbreaks among homosexual men are rare. The reasons for this are not entirely clear. Recent evidence from a CDC study in Miami has associated PPNG infection with inappropriate use of antibiotics (*3*).

Patients with inadequately treated PPNG infection are at high risk for complications. Women are especially at high risk for pelvic inflammatory disease. PPNG is effectively treated with ceftriaxone or spectinomycin, in doses recommended in the "1985 STD Treatment Guidelines" (*4*).

Once antibiotic-resistant gonorrhea becomes endemic, eradication is extremely difficult; it is also expensive. In these areas, all patients with a presumptive diagnosis of gonorrhea should be treated with either ceftriaxone or spectinomycin. Comprehensive recommendations for prevention, surveillance, diagnosis, and control of antibiotic-resistant gonorrhea have been recently developed by CDC in consultation with an expert advisory panel and are currently being reviewed by state and local health officials. These will be published later this spring as an MMWR supplement.

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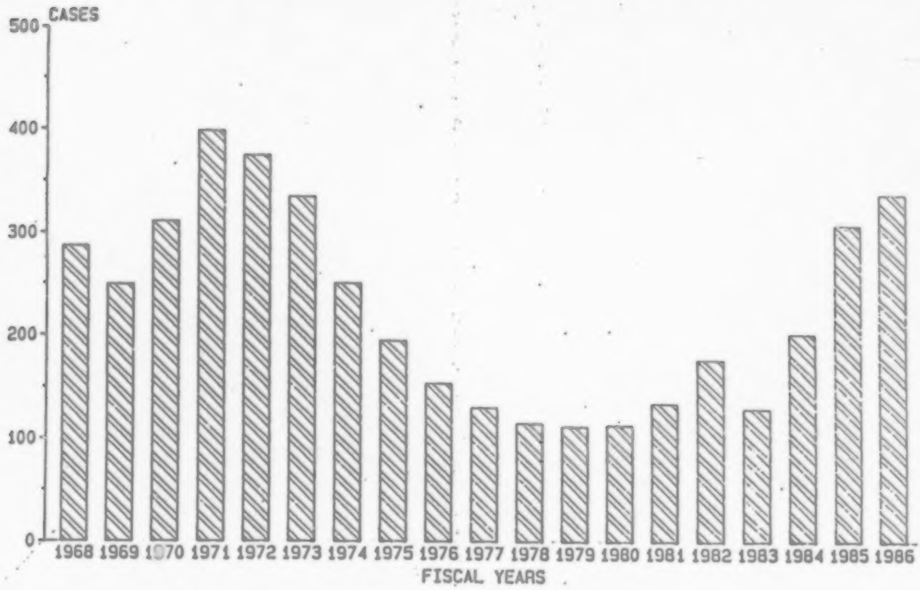
3. Zenilman JM, Bonner M, Sharp K, Alexander ER. Penicillinase-producing *Neisseria gonorrhoeae* (PPNG) in Miami: etiologic roles of core group transmitters and of the illicit use of antibiotics [Abstract]. New Orleans: 26th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1986.
4. CDC. 1985 STD treatment guidelines. MMWR 1985;34(4S).

FIGURE 7: CONGENITAL SYPHILIS UNDER ONE YEAR OF AGE
UNITED STATES, FISCAL YEARS 1968-1986



Epidemiologic Notes and Reports

Early Syphilis — Broward County, Florida

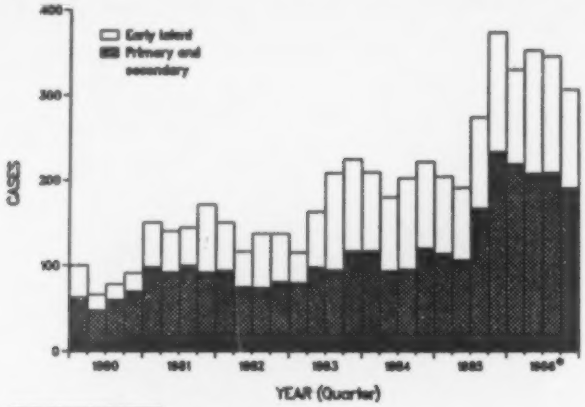
During the 1980s, the number of early syphilis (primary, secondary, and early latent) cases in Broward County, Florida, has increased—from 328 in 1980 to over 1,150 in 1986 (Figure 2), with a peak in the last half of 1985. From 1984 to 1985, primary and secondary (P&S) syphilis accounted for most of the increase in Broward County.

This upward trend in P&S syphilis in Broward County contrasts with the general downward trend observed from 1982 to 1985 in both Florida and the rest of the United States (Figure 3). However, Florida, with 37.6 cases per 100,000 population in 1986, still has the highest rate of P&S syphilis in the country.

In 1985, rates of early syphilis in Broward County were highest in the 20- to 24-year-old age group and were 446/100,000 for men and 290/100,000 for women in this group. Rates of early syphilis adjusted for race were 730/100,000 for blacks, 21/100,000 for whites, and 50/100,000 for Hispanics. Ninety-six percent of cases among women occurred among those of childbearing age (15-44 years of age). As a result, the number of cases of congenital syphilis increased to 25 in 1986; 10 had been reported in 1985, and six, in 1984.

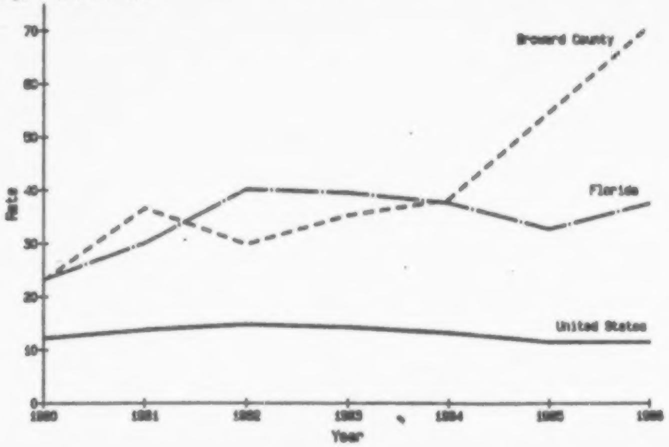
Two studies were performed to identify characteristics of patients reported during the months of greatest increase. First, surveillance data routinely gathered on all patients with early syphilis from 1980 through 1985 were reviewed. Second, detailed clinical and behavioral data were collected from interview records of a systematic 25% sample of patients diagnosed with syphilis in 1985. These data included reason for seeking medical attention, address of residence, sexual preference for males, and history of prostitution for females. These two data sets were compared with surveillance data from previous years.

FIGURE 2. Early syphilis cases, by quarter and stage — Broward County, Florida, 1980-1986



*Control measures began in 1986.

FIGURE 3. Rates of primary and secondary syphilis — United States, Florida, and Broward County, 1980-1986



In 1985, early syphilis cases occurred primarily among heterosexual blacks in Broward County. Eighty percent (836) of reported cases occurred among blacks; 18% (187), among whites; and 2% (20), among Hispanics. In contrast, the percentage of syphilis cases among blacks had ranged from 48% to 64% during the 4 previous years. Heterosexual males, who represented 39% of reported male patients in 1982, constituted 80% of male patients by 1985. Over 70% of early syphilis patients reported in 1985 lived in 11 census tracts that together contained less than 15% of the 1,162,031 residents of Broward County. The median income in these census tracts is <$15,000 per year. The concentration of cases clustered in these census tracts was greater in the latter part of 1985 than in the earlier part of that year.

These results prompted further investigation. The systematic 25% sample collected for 1985 was extended to include a similar sample of cases reported in the last 6 months of 1984 and the first 3 months of 1986. The sample was then divided into two periods: July 1, 1984, through June 30, 1985, the interval immediately preceding the rapid increase in reporting of cases (endemic cases), and July 1, 1985, through March 31, 1986, the interval of greatest increase (epidemic cases). Female patients diagnosed during the epidemic months were significantly more likely to be prostitutes than those reported during the prior 12 months (odds ratio [OR] = 2.5, 95% confidence interval [CI] = 1.1-6.1). Male patients were significantly more likely to be exclusively heterosexual than those reported in prior months

(OR = 2.07, 95% CI = 1.1-3.9). During the 9 epidemic months as compared with the previous endemic months, more patients were examined for lesions and symptoms, and fewer patients were identified either during screening or as sexual partners of infected persons (OR = 1.87, 95% CI = 1.2-2.8). Thus, the ratio of symptomatic (P&S) to asymptomatic (early latent) patients increased from 0.9 : 1 in the endemic period to 1.3 : 1 in the epidemic period.

The Broward County Department of Health responded to these increases in early syphilis by intensifying surveillance efforts, including active surveillance of laboratories that perform serologic tests for syphilis. Moreover, serologic screening was increased in the high-prevalence census tracts and in high-risk populations, including jail inmates of both sexes. County facilities providing prenatal care intensified their rescreening program for asymptomatic women during the third trimester. The ratio of symptomatic to asymptomatic patients decreased, from 1.9 : 1 in the first quarter to 1.4 : 1 in the second quarter of 1986. In the last quarter of 1986, a decrease in early syphilis was observed.

Reported by: C Konigsberg, MD, Broward County Dept of Public Health; JJ Witte, MD, M Wilder, MD, Acting State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs. Epidemiology Research Br, Program Svcs Br, Div of Sexually Transmitted Diseases, Center for Prevention Svcs, CDC.

Editorial Note: The increase in early syphilis in Broward County, as in another outbreak in the 1980s (*1*), was largely due to heterosexual transmission. In addition, female prostitution, which has contributed to syphilis transmission in other outbreaks (*1,2*), appears to have played an increasing role in early syphilis occurring in Broward County. Moreover, early syphilis cases are concentrated largely in low-income areas of the county.

Along with national trends (*3*), early syphilis cases among male homosexuals in Broward County are decreasing both in absolute numbers and in the percentage of total cases. This may be partially explained by changes in lifestyle among male homosexuals in response to the threat of acquired immunodeficiency syndrome. Such changes may reduce their acquisition of syphilis, as it may have reduced their rate of infection with other sexually transmitted pathogens (*4,5*).

The high rate of early syphilis in women of childbearing age has contributed to increases cases of congenital syphilis. Prenatal serologic testing for syphilis at the initial visit and in the third trimester (*6*) has been widely implemented and should increase the identification of asymptomatic infected women and prevent congenital syphilis infections. High priority is being given to identifying and treating sexual partners of heterosexual male patients to interrupt transmission to women within the community and to detect infections in women before they become pregnant.

The syphilis problem in Florida is not restricted to Broward County. However, serologic screening of sexually active residents of high-incidence areas and in high-risk populations is increasing the number of diagnoses of asymptomatic cases in Broward County. Throughout Florida, contact tracing (*7*) and serologic screening (*8*) of populations at risk are being used to identify asymptomatic infected persons and thereby to control the spread of syphilis.

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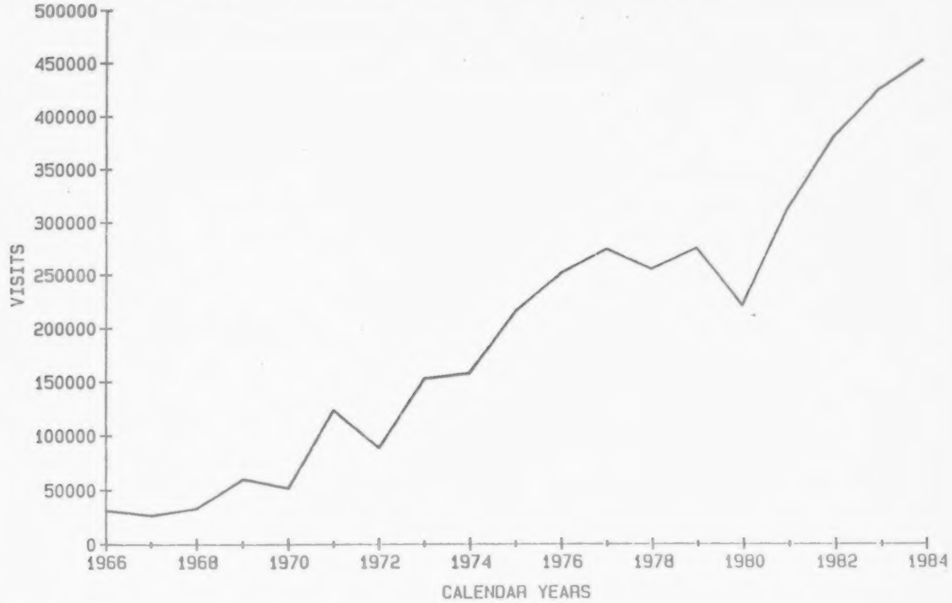
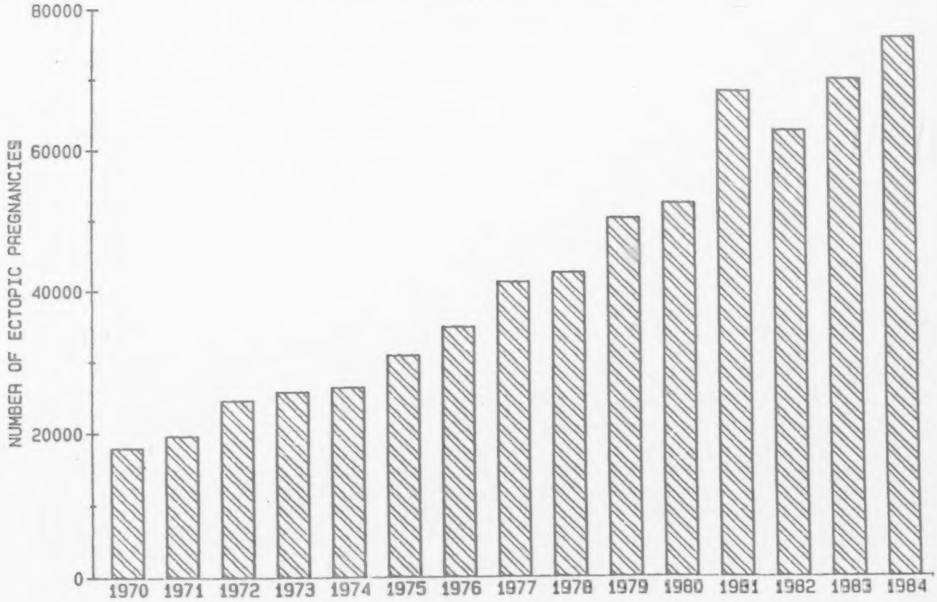
FIGURE 9: GENITAL HERPES SIMPLEX VIRUS INFECTIONS
NUMBER OF VISITS TO PRIVATE PHYSICIAN'S OFFICES
UNITED STATES, CALENDAR YEARS 1966-1984



SOURCE: NDTI

FIGURE 16: NUMBER OF ECTOPIC PREGNANCIES
(WOMEN 15-44 YEARS OF AGE)
UNITED STATES, 1970-1984



STATEMENTS OF:

DR. LARRY C. DEEB

DR. FRANCIS C. WOOD, JR., CHAIRMAN, ADVISORY COMMITTEE OF THE WASHINGTON STATE DIABETES CONTROL PROGRAM

LAURA BAILEY, MAINE DIABETES CONTROL PROJECT, WINTHROP, ME

Senator CHILES. Now we will hear from Dr. Larry C. Deeb and Dr. Francis Wood and Laura Bailey from Maine.

Dr. DEEB. Good morning, Mr. Chiles. We are here on behalf of the Centers for Disease Control Diabetes Control Program.

We in Florida have shown a serious gap in the health care for diabetes, and I think my presented testimony shows that we have been able to bridge that gap and improve the health care, the complications of diabetes, and would refer to the first table in my written testimony that shows how we have accomplished that in Florida.

We are here today to make two points to you and to the committee. No. 1, is that the current CDC diabetes funding for 1987, which is at $7.2 million, is marginally adequate. A proposed $2 million cut by the administration for State funding is totally unacceptable, and I believe that the successes in the CDC program would argue against such cuts.

No. 2, if that is not argument that is success, the National Diabetes Advisory Board, in its long-range plan for 1987 has urged a $14 million increase for translation center at the Centers for Disease Control. I have asked Ms. Bailey and Dr. Wood to address some of the successes in their States as CDC diabetes programs.

Ms. BAILEY. Good morning. I have been associated with the 10 year program in Maine, the Diabetes Control Program.

At that time Maine was not a safe place for people with diabetes to live, and fairly often with a complication I would go elsewhere, like to Boston or somewhere else. In fact my husband and I were planning to retire to another State so that I could be near a medical center where I would get good care, because I have had this disease already for 36 years.

We are now considering not moving because it is becoming safe, which I feel is a very good testimony to this program. I have always been an advocate of quality of life, extended life expectancies and safe places for people with diabetes to live.

This means information and education of the person with diabetes and all the health care providers who care in the many areas that this disease attacks. This takes money. And we have had some already and you have been generous, but it is just the tip of the iceberg it is reaching.

Twenty-six and seven years ago I had very risky and dangerous pregnancies, and the odds were very much against me having successful outcomes. I happened to be in an area where there were world-renowned specialists in diabetes pregnancies and they pulled me and both daughters through. They are now very healthy young women I would like to have you see.

Senator CHILES. Congratulations.

Ms. BAILEY. Still in Maine, though, a pregnant diabetic woman is five times more apt to lose her child than a nondiabetic pregnant woman. So with that in mind they have initiated the Diabetes Pregnancy Program. They monitor throughout the pregnancy, they give pre-pregnancy counseling.

A friend of mine who is 34 years old last year signed up with this program and was carefully monitored throughout. Two weeks ago she gave birth to triplets. We think this is unheard of ever before in the history of diabetes. And this is due to the program. And we are all rejoicing over this.

However, it is essential that the $2 million be returned to this program. CDC would love to initiate this program in every State in the country, so that everywhere would be safe for diabetic women to have children. Thank you.

Senator CHILES. Thank you.

Dr. WOOD. I am Francis Wood. I have been chairman of the advisory committee for the Washington State Diabetes Control Program for the past 5 years, and a member of it since it started about 7 or 8 years ago.

I am also an associate professor at the medical school at the University of Washington. I have been on the faculty for over a quarter of a century, and I care for a number of diabetic persons in the university clinics and am particularly interested in education.

I have seen what our Diabetes Control Program in Washington has been able to do over the past years for the State, and that is printed up in my printed testimony. I am also well aware of the need for translation of information to the practicing physician.

I note that in 1966 Lyndon Johnson said that we must make sure that no life-saving discovery is locked up in the laboratory. I think that no discovery that will improve the life of patients has clearly been proved should be locked up.

Senator CHILES. How much are we talking about for this translation?

Dr. WOOD. The translations?

Senator CHILES. Yes, sir.

Dr. WOOD. The translation is a question of translating information——

Senator CHILES. Yes; how much is the cost?

Dr. WOOD. The cost of the translation center would be $14 million in the additional appropriations for 1988.

What this would do would be to continue the efforts already started by the CDC in terms of the State programs, plus strengthening their centralized efforts, which they have already demonstrated. This primer of prevention and treatment of five complications of diabetes is an effort of the CDC to translate to the practicing physician.

This is in 1982. It needs updating. Now in the State of Washington we are working on little pamphlets like this, that are the sort of things you have with your automobile for patients that say, every so many weeks I am supposed to have my glucose checked and my eyes checked and things of that sort, and I will give you a copy of one of those. They are just off the press.

But this is an effort to teach physicians through their patients. This is an effort to translate material from the laboratory to the physicians directly. There is a need for expertise along these lines.

In conclusion I would just like to say that we need both appropriations to expand the State programs that have been so tremendously successful in Washington, and need to fund a translation center at the CDC that expands the CDC's ability to translate acute infectious disease questions, such as smallpox vaccination into areas of chronic disease such as diabetes.

PREPARED STATEMENTS

Senator CHILES. Thank you very much. Thank you all for your testimony. We will place all your statements in the record at this point.

[The statements follow:]

STATEMENT OF DR. LARRY C. DEEB

The state-based Diabetes Control Programs of the Centers for Disease Control were established after the publication of the first long-range plan for diabetes in 1976. During the past decade these state-based programs have demonstrated that the application of currently available prevention and treatment information can lead to significant reductions in mortality, morbidity, and savings in associated economic costs.

Florida has only been fortunate enough to participate as a full partner with the CDC program for the past two years. However, we have had a CDC public health advisor assigned for the past four years. Florida has had a strong history of diabetes related public health programming and the association with CDC has served to improve our programs and expand our potential for savings. At the outset of this testimony, it would seem important to comment on the public health advisor as a professional assigned to the field. These individuals bring expertise in public health, tempered by many and varied administrative and field experiences, which invariably aid the state in its public health efforts. I can only applaud the efforts of CDC and, in specific, our public health advisor assigned to Florida for contributing to our staff's successes in diabetes and other chronic diseases. The current plan offered by the National Diabetes Advisory Board includes CDC advisors as part of the diabetes control effort. I would strongly urge adoption of adequate personnel ceilings in order to ensure CDC's ability to place advisors in each project state.

It would seem appropriate to document some of the important advances we have made in Florida as a result of our CDC-assisted Diabetes Control Program. I should emphasize that other states assisted by CDC have made similar progress. There is, never-the-less, much yet to be accomplished. This cannot be accomplished if adequate funding for the programs is not continued. I would urge the authorization of the full funding of $ 7.2 million to allow for continuation of present CDC programming.

Florida has had as its major focus the prevention of the costly secondary complications of diabetes. These are retinopathy, amputations, renal disease, ketoacidosis and the numerous adverse outcomes of pregnancy. Hypertension is also addressed because of its close relationship to diabetes-related vascular problems.

Florida has identified as a major target of its efforts that population which is medically underserved. This population is poor, often has no medical insurance, and receives at best limited and fragmented care. In Florida, over 3 million of its 11 million citizens fall into this category. Florida is fortunate that primary care for these individuals is beginning to be addressed by federal and state-funded primary care initiatives. At present these programs are still inadequate to meet the total need. The Florida Diabetes Control Program has worked with a number of primary care centers where we demonstrated that medical and educational services aimed it preventing the complications of diabetes can be improved. We surveyed health care practices as they related to prevention and control of complications and then offered professional education to the staff and ongoing consultations with state-funded Diabetes Research, Education and Treatment Centers. After one year the health care practices showed remarkable improvement (Table 1). Florida has used this informative experience as rationale for expanding these remedies to other primary care centers.

The marriage of a motivated state effort in diabetes and chronic diseases with the technical and financial support of the Centers for Disease Control has resulted in a model program that has proved its viability. Withdrawal of CDC's ability to support the efforts of Florida and other states at this time would only serve to hinder or perhaps even dissolve these invaluable prevention activities early in their development. While government at all levels will pay the price for having missed the early prevention opportunity, it is the citizen who is least able to help himself or herself that ultimately is deprived of much needed medical care.

The location of Florida's Diabetes Control Program under the authority of the State Epidemiologist has ensured that a scientific foundation be clearly established for all programming. This epidemiological expertise may make Florida somewhat unique among states' diabetes efforts. The benefit has been in the design and implementation of programs which maximize resources through careful targeting of populations. This fact allows the diabetes programming to serve as models for other chronic disease activities. This ability to translate research into programs is a critical need in diabetes and the other chronic diseases. The National Diabetes Advisory Board has recommended the establishment of a Diabetes Translation Center at CDC. It seems critical to us in Florida that the committee understand the logic and the tremendous need to establish this program.

Basic research often leaves the laboratory as proven fact, but with additional operational research required to turn the clinical findings into applicable programs at the patient/community level. This translational research has often not been conducted or it has taken years to convert the finding of expensive research into activities useful in the field. This has never been the purvey of NIH. CDC has, in other areas, been involved in translation. Controlled trials showed that early detection of retinopathy prevent blindness. CDC programs translated this knowledge into practical programs to identify high risk patients, provide examinations and arrange necessary treatment. Indeed, it has been a major quandary that has plagued the diabetes community. Much is known, but not yet practiced. Much potential exists that is yet to be realized. The diabetes translation center could identify realistic goals, pilot and evaluate strategies, and then develop the national consensus to move these strategies into community-level practice. This role must be assumed by some agency. CDC seems the proper locale for this function since the Centers have to some extent, previously performed this role.

The problem has been that in the past there were no funds for CDC to properly and consistently perform the translation function in a comprehensive fashion. CDC did perform what I would describe as minor miracles in achieving consensus in the areas of preventable complication and third party reimbursement for patient education. Given the current level of funding, the state programs can continue or CDC can, with increased funding, focus on translation.

We recommend, indeed Florida implores, you to establish a Diabetes Translation Center at CDC. This will require an additional $14 million. Six million will be for state operations; 1.8 million for operation of data systems, epidemiology, surveillance, and evaluation; 6 million for program development and applied research; and only 0.2 million for the new center's direction and administration.

Table 3a

Florida Diabetes Control Program

Primary Care Complications Program

DOCUMENTATION OF SEARCH

FOR COMPLICATION IN CLINICAL RECORD

INTERVENTION GROUP N=399

	YEAR ONE	P VALUE	YEAR TWO
RETINOPATHY			
HISTORY	114(28%)	<.01	152 (38%)
EXAM	45 (.11)	<.001	187(46)
REFERRAL	34(.09)	<.001	168(43)
NEPHROPATHY			
URINALYSIS	277 (69	<.001	379(94)
IF URINALYSIS THEN PROTEINURIA	85(30)	NS	124 (32)
IF PROTEINURIA THEN BUN/CREATININE	60(71)	NS	88(71)
LOWER EXTREMITY CARE			
HISTORY	182(45	<.001	289(73)
EXAM	123(.66	<.001	372(94)
HYPERTENSION			
BLOOD PRESSURE TAKEN	399 (100)	NS	399(100)
HYPERTENSION DIAGNOSED	262(67)	NS	268(68)
LAST BP READING			
140+mmHg or90+mmHg	257 (64)	<.05	225(56)
160+mmHg or 95+mmHg	85(21)	NS	68 (17)

STATEMENT OF DR. FRANCIS C. WOOD, JR.

Mr. Chairman, Committee members and staff. I am Dr. Francis Wood and appear before you as the Chairman of the Advisory Committee of the Washington State Diabetes Control Program, a position I have held for the past 5 years, giving me an opportunity to observe the role of this program in our state. I also am an Associate Professor of Medicine at the University of Washington, having served on the full-time faculty there for 26 years with a particular interest in educational approaches. I care for many people with diabetes, both in the general medical clinic and in our specialized endocrine clinic every week at the University Hospital.

I appear before you to support funding for the Diabetes Translation Programs that have been proposed in the Long Range Plan to Combat Diabetes - 1987 recently released by the National Diabetes Advisory Board (NDAB) advisory to the National Institutes of Health. The Diabetes Translation Programs are designed as intensified support structures to expand the successful role of the Center for Disease Control (CDC) and its Control Programs which now exist in 28 states. This role has involved identifying, prioritizing and solving problems of applying significant research discoveries to the care of people with diabetes.

Clearly, one of the important needs in many health care areas is the facilitation of rapid translation of information from research to widespread clinical practice. Delays in such translation are seen in the area of communicable diseases. Small pox vaccine was available for over 100 years, but resulted in the eradication of small pox on the globe recently after only 10 years of its purposeful intensive application. Furthermore, the translation of our knowledge of polio and measles vaccines to required immunication of school-age children has led to the realization that these two diseases also could be eradicated within our lifetimes.

Similarly, major improvements in the success of diabetes care could result from more effective translation of our research discoveries for daily use of physicians and their patients.

The Washington State Diabetes Control Program has established a focus within the State Health Department for public health efforts related to diabetes. A close, working relationship has been developed with both the School of Medicine and the School of Public Health at the University of Washington. A small Control Program staff working with the Advisory Committee members has done much to stimulate and improve patient and professional education and care standards in our state, both identifying and producing information for translation, as well as providing the translation vehicle to move information out to the primary care physicians and patients in their communities.

A beautiful example of a successful effort at such translation is the guide, The Prevention and Treatment of Five Complications of Diabetes, that was published by the NDAB in 1982 and distributed by the CDC's Control Programs and other agencies around the country. This volume represented a major successful attempt to translate current applicable research discoveries into clinical care and prioritize options in caring for people with diabetes. It was excellent, but is now in need of updating. Medical science moves fast.

Shortly after its publication, our state's Diabetes Control Project launched an attempt to find the most effective way to get physicians to read this guide. Should we send it out from the State Division of Health, from the University Medical School, or from the President of the State Medical Association? Does it make any difference if it is in a brown or white envelope? Does the promise of educational credit stimualte more physicians to read the booklet? These challenging questions and others illustrate some of the problems faced daily in focusing the attention of primary care physicians on important new information.

I recently co-authored a paper in the New England Journal of Medicine which attempted to translate the confusing research information about the role of diet in the care of people with diabetes so that physicians could decide more easily whether to utilize or disregard these scientific reports. I found this to be a complex and challenging task in spite of my in-depth background in the field. It would be nearly impossible for a primary care physician to separate the wheat from the chaff.

Our state Diabetes Control Program has conducted one of the largest population-based studies on the effect of diabetes on the health of mothers and their babies. This has helped focus a major concern in this nation on maintaining good blood glucose control during the first 6 weeks of pregnancy to prevent congenital defects. It is now clear that the diagnosis of diabetes made early in pregnancy is too late. What is needed is a major push toward pre-pregnancy counselling about diabetes and the importance of careful glucose control before conception. This information is now ready for translation to primary care physicians and their patients.

A second program of ours in Washington State has looked at vascular, neurologic and metabolic factors leading to leg amputations in diabetic patients. We are discovering that the approaches of patients and their physicians to foot care can and do prevent leg amputations in patients with diabetes.

Information from Diabetes Control Programs in other states has indicated that photographs of the retina in the back of the eye can detect early vascular lesions in diabetes. Such lesions are amenable to treatment with lasers which sharply reduces loss of vision and blindness if the lesions are detected early enough. Such lesions, however, can be subtle and are often missed by primary care physicians in their general checkup examinations. Even eye specialists who are not well versed in the current research on diabetic problems can miss important findings. Our study in the Yakima Valley of central Washington State was designed to see if trained technicians can take careful retinal photographs to be read later by eye experts, thereby providing specialized service and treatment. Our photography service is coordinated through the community's general hospital and extended to include both the clinics of the Yakima Indian Nation and those of the migrant farm workers. Such photographs have already led to timely laser treatments which will protect vision. This outreach program may clearly prove to be cost-effective in extending eye specialist monitoring of diabetic patients, particularly in underserved areas.

In the role of translating information to patient care, the Washington State Diabetes Control Program set up a Model Outpatient Diabetes Education Program in the Vancouver, Washington area. We were able to contact 30% of the diabetic persons in the area and were among the first to use the new measurement of glycosylated hemoglobin as an index of improved diabetes control. Techniques were developed and sharpened to attract patients to our educational efforts through their physicians. We have underscored here that a smart patient is often very helpful in stimulating physicians to update their information. More study is needed to determine the optimal use of this approach in the field of diabetes and, ultimately, in many areas of chronic disease care.

The requested support for the CDC Diabetes Translation Programs would continue the existing efforts in 28 states, exemplified by Washington State's Diabetes Control Program, and expand these programs to 10 additional states. Furthermore, it would strengthen the efforts of the NIH and the CDC in determining which information from all areas of diabetes research needs to be rapidly and effectively applied to patient care. Without CDC support and leadership, it is impossible to conceive of a system that would compile international research information, develop a professional consensus prioritizing the importance of this information for patient care, getting this information to patients, physicians and communities and, finally, evaluating the effectiveness of the entire system in achieving the important objectives. The individual states alone, without CDC support and leadership could never develop the comprehensive expertise required in these areas. The CDC Diabetes Translation Program, with the support of both the National Diabetes Advisory Board and its own Technical Advisory Committee, is in a key position, with your financial support, to continue and enhance the excellent progress made in recent years through the Diabetes Control Programs in 28 states. Now through the Diabetes Translation Program, I anticipate we will be able to further the care of persons with diabetes in this country by providing a mechanism for the rapid translation of practical, applicable research information to primary care physicians, other health care professionals, their patients and their communities.

STATEMENT OF LAURA BAILEY

I am Laura Bailey of Winthrop, Maine, an insulin dependent diabetic of almost 36 years, and am testifying on behalf of the Maine Diabetes Control Project Advisory Board. The Maine Diabetes Control Project is funded by the Centers for Disease Control. I have served on this board for the past ten years; four of which I was chair. I have also served as a volunteer for the American Diabetes Association locally, statewide and nationally.

The National Diabetes Control Project is now being funded with $7.2 million. $2.2 million stay at the Centers for Disease Control for the base operation while $5 million is allocated to about half the states. I understand that the proposed budget recommends dropping $2 million of those $5 million. This would be a disastrous move for all of us. I doubt if there is another program you sponsor that brings more long term returns for your dollar than the Diabetes Control Project. I am requesting that the $2 million be restored the Project.

I have a second request integral to the first. Experts serving on the National Institutes of Health Diabetes Advisory Board solicited input from over four hundred people throughout the country knowledgeable in the area of diabetes as to what the real needs were in diabetes. After many letters, telephone calls and conferences over a three year participatory process; they evolved a three part long range plan.

Part one of this plan proposes a Federal Diabetes Translation Center. Our existing program would become part of the Translation Center. The total price tag for this proposed Center would be $21 million.

I am excited to think that the many research advances related to diabetes in this country could have a center to report to on a regular basis and that their discoveries could be translated and disseminated quickly to the "trenches." The MD's, Diabetes Educators, Nutritionists, the people caring for people with diabetes, plus those of us who have diabetes, sometimes have a long wait for "good news" like new types of insulin blood testing machines, etc.

I am also excited to think the Center would focus on collaboration in every aspect of diabetes plus speed up the process of translation and promote and assure quality standards of education for all states rather than half of them.

I have found, over the years, it takes a certain level of sophistication to travel through the maze of diabetes resources, information and people available to me in my various areas of need. My husband, Jake, and I have traveled many miles to find the kind of help I needed when I needed it.

All of my sisters and brothers in the diabetes world are not as fortunate. Many do not have the options I have had and do have. My husband's insurance coverage is good. His salary is adequate to cover that which is not covered by insurance. The good and healthy foods needed for a person with diabetes cost more than less appropriate foods. He can get time off to take me to MD's at a distance when necessary.

I have developed the courage to ask why, why not, how, how much, when, etc. I have developed enough knowledge to disagree, to argue, to move on, if and when necessary, without feeling guilty. The Translation Center would make a tremendous difference in so many more lives. I alternate between grief and anger over friends and acquaintances who have died unnecessarily from diabetes complications due to ignorance on the part of the individual and those caring for these individuals. Several of us who have had diabetes for long periods of time agree that at Translation Center would have been extremely beneficial to our lives. It would have educated us about our disease early on, saved sick days at school and work, medical bills, delayed and prevented complications and would have added to our longevity.

In 1977, Congress allocated money to be spent to reduce morbidity and mortality due to diabetes. Until that time, this third leading killer by disease, had largely been ignored. Diabetes is often called a "disease of diseases." To elaborate a bit:

1. Diabetes is the leading cause of adult blindness.
2. 25% of all people on dialysis have diabetes.
3. We are prone to small blood vessel disease especially in the eyes and kidneys.
4. Diabetic women are several times more prone to heart attack.
5. Over one half of all people with diabetes have hypertension.

6. Amputations are fifteen times more frequent in people with diabetes.
7. The perinatal death rate of infants of mothers with diabetes is two to four times higher than non-diabetic pregnancies.

These complications, and others I have not mentioned, are very common to the person with diabetes whether or not she or he adheres to the necessary regimen pertaining to this disease. You get the feeling you are damned if you do and damned if you don't. This regimen includes: keeping in careful balance ones food intake, insulin or oral agents, amount of exercise and one's stress level. Several Blood tests daily relay information on blood sugar levels.

Control is the name of the game twenty four hours a day for the person with diabetes. You live in two worlds. One is outside with everyone else, while inside you wonder if you have had enough or too much insulin, when and where will your next meal be, is your blood level too low with a need for food or too high with a need for exercise? What is your stress level doing to you?

Thus one realizes the importance of a wide range of information, knowledge and skills needed on the part of the person with diabetes and also the dietitian, nurse educator, physician and all other related health care providers.

Maine was most fortunate to be one of the original states receiving funding. Results of data collecting determined there was a great dearth of knowledge concerning diabetes in the State of Maine. I recognized this soon after we moved to the state in 1970. Maine was not a "safe place" for a person with diabetes to live. It is a scary thing to realize you know more about the disease than your MD and that you do not know very much. I learned to interview my MD's and since have been very pleased with my "employees!" It is imperative to have a good working relationship and to be a "team" with your MD. It became my dream that Maine would become a "safe place" for all people with diabetes.

After the staff people on the project determined the need for education the central component of the Maine Diabetes Control Project became an outpatient diabetes education program called the Ambulatory Diabetes Education and Follow-Up (ADEF) Program. The goals of the ADEF Program are to assist diabetics in learning the knowledge, skills and attitudes necessary to achieve and maintain good diabetes control and to prevent the acute and long term complications which result in unnecessary hospitalizations. Since the ADEF Program began in 1980 we have had over 6,000 of an estimated 65,000 people with diabetes go through the diabetes teaching program. We have many more people to reach and new people are contracting the disease daily.

Maine was the first Project State to prove its program worthy to third party payers for reimbursement for outpatient diabetes education. Blue Cross/Blue Shield led with Medicare and Medicaid following suit on reimbursement. As other states developed high quality programs they too became reimbursed.

When I became pregnant the first time I had had this disease for nine years. Growing up in a small Vermont town I had a very minimal knowledge of diabetes with no idea of complications to come. It was 27 and 28 years ago when I had my two babies. I was hospitalized about forty times during these extremely difficult and risky pregnancies. My physician, Ethan Sims, in Burlington, Vermont, was world reknowned for his work with diabetic pregnancies. Without his skillful expertise and caring, neither my daughters nor I would be alive today.

Today in Maine, the Diabetes in Pregnancy Project seeks to prevent adverse outcomes of pregnancy in women with established diabetes by working intensively with health care providers and providing education for women of childbearing age with diabetes. The Project has enlisted the active voluntary participation of dozens of obstetricians, internists and family practitioners throughout the state. The Centers for Disease Control is working closely with the Maine Diabetes Control Project as they see this as a model for diabetes in pregnancy programs in several states. This is in place now with over 75% pregnant diabetic women participating already. Another way Maine is becoming a "safer place" for women with diabetes.

In 1970, I was discovered to have cataracts and retinopathy in both eyes. They were determined to be in remission. I prayed they would stay in that condition until new methods of treatment could be found. In the meantime we moved and an ophthalmologist, highly qualified and experienced in working with diabetic eyes, moved to our area. She kept vigil over my eyes and removed one cataract when it became necessary, also gave me laser treatments in both eyes when that became necessary. Laser was not available in 1970 so I have indeed been fortunate. I could easily have been blind now.

The Prevention and Control of Diabetic Eye Disease Program is new in Maine and seeks to prevent blindness in high risk cases. It has the active support of the Maine Society of Eye Physicians and Surgeons and many ophthalmologists throughout the state - including my Dr. Katz. This and the Pregnancy Project are two good examples of public/private sector cooperative programs between private physicians and the Bureau of Health. Both are programs of the Diabetes Control Project.

I was fourteen years old when I contracted diabetes - nearly 36 years and about 21,000 shots ago. I later learned my Dad had not expected me to live beyond college years. Life expectancies for young people with diabetes were shorter than today. Because I had not expected to reach age 50, when I did, last October, it was an exciting milestone and a significant time for me. I told my husband Jake I wanted to have a memorable celebration and thought a hot air balloon ride would be appropriate. Bless him, he went along as he has with so many other crazy ideas I have had. We had a marvelous and beautiful trip up the Kennebec River. After we landed in a meadow at 8:45 a.m. our driver popped the cork on a bottle of champagne to toast our trip and my birthday. For those of you who understand diets that was one fat exchange for me. Two days later my younger daughter gave me a surprise birthday parade and party. This daughter is the one who wrote so many papers on diabetes in the 8th grade her teacher finally said, "Diabetes is a fascinating subject, Elizabeth, and I have learned a lot, but next time could you please choose a different topic." Our older daughter said she was almost that age when she realized everybody's mother was not diabetic.

Due to technology such as home blood testing machines and new and better ways of taking care of myself I expect to live for many more years! The Diabetes Control Project helps keep me updated. However, what I have related to you is only the tip of the iceberg. An incredible amount of work needs to be done to make all of this country safe for people with diabetes. I hope my life expectancy will include having grandchildren. I also hope it won't be necessary for any of us to come here again asking for money. I hope due to this concentration of money, effort, science and technology we will soon have a cure. If I do come back to see you I would like to be able to bring pictures of healthy grandchildren to show you. Both daughters are waiting to have children as they too want to be sure to be living in safe places for people with this disease which they and their future children could inherit. In the meantime I am grateful for the countless inroads that have been made with the money you have already allocated. It has been well spent in Maine. I feel much "safer" now in our local hospital. I was in just before Christmas with uncontrolled nausea and again recently to have a large nonmalignant polyp removed from my cervix. Their recent care of me as a person with diabetes, had improved about a thousand per cent over my hospitalization eleven years ago when I was in with a bad case of pneumonia.

This is good news. Maine is becoming a "safer place" for people with diabetes. It indicates my dream is coming true. It is happening in other places but we cannot stop now with the job only partially completed. We must continue until our whole country is safe for people with diabetes to live. With your generous assistance we can reach this goal!

Thank you and God Bless You!

STATEMENT OF DR. LEWELLYS F. BARKER, SENIOR VICE PRESIDENT, AMERICAN RED CROSS

Senator CHILES. Now we will hear from Lewellys F. Barker, M.D. and senior vice president of the American Red Cross.

Dr. BARKER. Thank you, Mr. Chairman. I appreciate the opportunity to speak to your subcommittee about support for education in the fight against AIDS. The American Red Cross is very well aware of your concern and attention to the AIDS epidemic. We particularly appreciate the $20 million supplement that you have granted CDC to help its education project, and also your leadership in the call for a national commission on AIDS.

We are here today because the red cross has spent just in the past year approximately $6 million on AIDS education throughout the country. We have done this in cooperation with the U.S. Public Health Service, specifically the Centers for Disease Control, the insurance industry, and a variety of other organizations.

We have, in fact, produced a number of brochures, posters, videotapes, materials which we estimate have reached in excess of 30 million people already. We do find that our resources are stretched to the limit however, and as we embark on a further phase of our AIDS education program, we are developing materials specifically for young people, people who may be starting to experiment with sex and drugs.

We are planning materials that will reach minorities, specifically blacks and Hispanics, and working cooperatively with a variety of organizations, such as the Urban League, COSSMHO, on this area. And we are developing materials for use in the work site by employees and employers.

When we began our AIDS education program in 1983, it was intended primarily for blood donors and physicians using blood, as well as patients and the general public. However, in 1985 the program moved into the area of general public education and it became a program in which we collaborated widely at both the national and the grassroots community level.

Mr. Chairman, the red cross has a well-known, well established grassroots community network of chapters. Over 600 of these chapters have designated people to work specifically on AIDS education. We believe this is a very efficient and effective network to use.

We see an enormous job to be done in this area, and it is for this reason that we have come to you asking for help in the form of a $4.5 million supplemental funds from the Federal Government to help continue our grassroots public education program in fighting AIDS. Thank you very much, Mr. Chairman.

PREPARED STATEMENT

Senator CHILES. Thank you, sir. We appreciate your testimony.

[The statement follows:]

STATEMENT OF DR. LEWELLYS F. BARKER

Mr. Chairman and subcommittee members, I am Lewellys F. Barker, M.D., Senior Vice President of Development for the American Red Cross. Thank you for allowing me to address you.

Mr. Chairman, the AIDS virus continues to spread exponentially throughout our society. The U.S. Public Health Service projects that by the end of 1991, the total number of AIDS cases will exceed 270,000, resulting in more than 179,000 deaths. In addition to loss of life, by 1991 AIDS-related health care costs are expected to range between $8 billion and $16 billion. AIDS affects all of us.

We agree with the U.S. Surgeon General. With no AIDS vaccine or cure in sight, the nation's only hope for stemming the tide of this epidemic is prevention. And prevention, in this case, translates into PUBLIC EDUCATION!

My mission today is to demonstrate what the American Red Cross, in cooperation with other private and public sector organizations has done with regards to AIDS education; what direction our education campaign is now taking; and why we are urgently seeking $4.5 million from the federal government to continue our grass-roots public education program.

The Red Cross has a long tradition of both responding to and educating the public about health emergencies. For example, the Red Cross played a vital role when the American public suffered a flu epidemic shortly after World War I. We were there during World War II when the need for blood was critical, and again in the 1950's, when polio was the public scourge. Now, in the 1980's, the Red Cross, in cooperation with the U.S. Public Health Service and other public and private organizations, is helping again. Red Cross strength lies in the public trust we've earned over the years, and in our vast nationwide network of chapters and volunteers that are active in their local communities.

What role has the Red Cross played so far in AIDS public education?

In 1983, we began educating active and potential blood donors about AIDS to prevent donations by people whose behavior puts them at risk for the AIDS infection. It became apparent, however, that transfusion-associated AIDS cases represented a very small part of a much larger problem. Therefore, in 1985, the Red Cross made a long-term commitment to educate the general public about all aspects of AIDS, and how to prevent it.

We soon entered into partnerships with PHS, the American Council of Life Insurance and the Health Insurance Association of America, and other organizations to develop and distribute AIDS public education materials. The results of these partnership efforts, we believe, are impressive. For example:

* In the last five months, alone, Red Cross chapters have had requests for and distributed more than **20 million** brochures on issues related to AIDS. The Red Cross developed these brochures in conjunction with PHS. In addition, all four U.S. armed services, the U.S. Coast Guard, and the State Department have reviewed and requested large quantities of these brochures for distribution among their personnel.

* The Red Cross, with a generous grant from the Life and Health Insurance industry, produced an award-winning documentary on AIDS, titled "Beyond Fear." "Beyond Fear" has been viewed by more than **6 million** people on television and in community-based education settings. In addition, the documentary has aired over the American Forces Information Network, the Hospital Corporation of America Satellite System, and the Southern Baptist Satellite Network, to name a few. The American Medical Association uses the documentary to train physicians in AIDS education, and copies of "Beyond Fear" were recently requested from the Red Cross by New York State for use in its 750 school districts.

* The Red Cross, again in cooperation with PHS, has developed and distributed AIDS public service announcements to **hundreds** of television and **thousands** of radio stations nationwide.

* The Red Cross has distributed more than **100,000** posters: one was produced with major funding from the insurance industry; the other, produced in cooperation with PHS, features singer Patti LaBelle and promotes the CDC AIDS hotline.

In addition to these collaborative efforts, nearly 600 Red Cross chapters nationwide have designated special AIDS coordinators to implement AIDS information and education programs. Most of these individuals are involved in local AIDS coalitions and task forces that go to schools, churches, civic and other community organizations to clearly, yet sensitively, inform young and old alike about how AIDS is transmitted and how best to avoid contracting the AIDS virus. Some chapters have developed AIDS homecare programs and courses to assist AIDS caregivers and people with AIDS. Still others have begun support groups for people with AIDS, their families, and friends.

Also, nearly five milllion copies of "AIDS: The Facts," a generic brochure produced by the Red Cross with PHS and insurance industry assistance, have been distributed. The brochure is also available in Spanish.

Mr. Chairman, public demand for our AIDS materials has far exceeded our expectations. We estimate that in the last 12 months we have reached as many as 25 million people through our program. But in light of recent comments by the U.S. Surgeon General and other public health officials regarding the spread and serious nature of this epidemic, much more needs to be done.

The Red Cross, therefore, is now into phase two of its AIDS public education campaign. This phase targets minorities, youth, and the workplace. For example:

* According to recent CDC reports, 39 percent of all reported AIDS cases are either black or Hispanic. Even more disturbing is that 8 out of 10 children with AIDS - those infected by their infected mothers - come from these ethnic groups. To reach these groups, the Red Cross has entered into or is pursuing collaborative relationships with organizations like the Urban League, Southern Christian Leadership Conference, League of United Latin American Citizens, the Labor Council on Latin America, and COSSMHO. Our documentary, "Beyond Fear," and many other Red Cross materials will have Spanish versions.

* The Surgeon General has identified youth as a critical audience for AIDS education. The Red Cross is developing a video on AIDS aimed at junior and senior high school students

nationwide. Endorsed by the National Association of State Boards of Education, and with technical guidance from the CDC, the National Institute on Drug Abuse, and others, the video is designed to be shown in schools or offered on free loan to parents to watch at home with their children. The Surgeon General makes a special appearance in the video.

* Workplace settings are yet another critical area in need of AIDS information. The Red Cross is developing a training program to be delivered on-site at businesses and worksites. Its purpose is to provide both information on AIDS and guidance in dealing with specific AIDS-related situations at the workplace.

In addition, the Red Cross throughout the country is working with labor unions and employers, Parent Teacher Association, gay groups and other AIDS service providing agencies, religious organizations, local and state public health departments, big businesses, small businesses. Anyone who can help get the word out about AIDS.

In short, Mr. Chairman, the Red Cross, in cooperation with many other organizations, is doing as well as planning when it comes to AIDS public education. But we need your help.

Since 1985, Red Cross national headquarters has spent $2.3 million of its own funds on AIDS education. This figure does not even count the the amount that hundreds of individual chapters have spent. This may not sound like much in contrast to federal government appropriations. But for the Red Cross, which has other Congressionally mandated responsibilities, $2.3 million for AIDS education represents a significant financial commitment. Frankly, however, we've exceeded the limits of our financial resources. Therefore, we are requesting $4.5 million from the federal government. We estimate that with this $4.5 million we can reach as many as 50 million more Americans with our AIDS Public Education Program.

In summary, Mr. Chairman:

* The Red Cross already has a vigorous AIDS education program in place, the ability to produce high-quality education

materials, and good working relationships with PHS and other public and private organizations.

- Many Americans already have identified the Red Cross with AIDS education, and many more are turning to us for information and assistance.

- Red Cross chapters are located throughout the United States to meet the individual needs of communities, with regards to AIDS education.

- The Red Cross has an excellent track record of working in public health emergencies.

- The Red Cross is viewed by the Amercian people as a trusted, reliable, and impartial human service organization.

With these strengths and abilities we have reached millions of people with a message about AIDS, its prevention and risk reduction. The $4.5 million will enable us to continue our efforts in partnership with the federal government and others to work to stop the spread of this dreaded disease. Lives are in the balance.

Thank you, Mr. Chairman.

STATEMENT OF DR. STEPHEN F. MORIN, SOCIETY FOR THE PSYCHOLOGICAL STUDY OF LESBIAN AND GAY ISSUES

Senator CHILES. Now we will hear from Stephen F. Morin, Ph.D., Society for the Psychological Study of Lesbian and Gay Issues.

Dr. MORIN. Thank you, Mr. Chairman. Thank you for the opportunity to talk on the issue of the AIDS appropriations. My name is Dr. Steve Morin, I am an assistant clinical professor of medicine at the University of California at San Francisco.

Also the incoming president of the California State Psychological Association, and have served on the California's AIDS Strategic Planning Commission and the California AIDS Budget Task Force for the State assembly. I am testifying today on behalf of the Society for the Psychological Study of Lesbian and Gay Issues, 1 of the 47 divisions of the American Psychological Association.

We would like to recommend funding of the Federal AIDS effort at a $1.5 billion figure for research, prevention, counseling, and treatment in fiscal year 1988.

Mr. Chairman, I am from California, the home of the tax revolt. We had interesting poll data presented to us last week where the people of California have indicated that after all these years of tax revolt they have come to the position to believe that sometimes the Government must spend more.

When asked about specific programs that they would be willing to pay for, even if it involved raising their taxes, the highest priority in the State of California was AIDS programming, with 73 percent indicating they would be willing to pay more if the Government were willing to do something about the AID issue.

This is more than schools at 68 percent and homelessness at 66 percent, and far greater than problems associated with police protection, which ran much lower. We believe the political will and the will of the people is to do more about the AIDS issue.

We are specifically supporting an appropriation of $550 million for continuation of the AIDS Research Program at NIH and ADAMHA. Of that we would recommend an appropriation of $35 million for the activities at the National Institute of Mental Health, which have involved everything from basic research on neuropeptides, which show great promise in terms of therapeutics, to the research on how to best facilitate the behavior change necessary to reduce the number of cases in the future.

We also support an appropriation of $450 million for a package of education and prevention activities, with a significant amount of that money going to ADAMHA. We specifically recommend $100 million be appropriated for mass media campaign. That is approximately the amount of money that Proctor & Gamble has budgeted for the marketing of the new form of liquid Tide and a new tartar control toothpaste. We believe the Federal Government's efforts at educating on AIDS should be at a similar level.

Perhaps most importantly, we are recommending $500 million for a program of risk counseling and testing of persons in a variety of programs and clinics. We are specifically concerned about interventions at family planning clinics, prenatal care clinics, sexually transmitted disease clinics, and drug treatment programs. We would like to have people entering those programs routinely assessed with regard to their risk history and appropriate recommendations for them made.

PREPARED STATEMENT

Mr. Chairman, we thank you for the opportunity of presenting our views today, and we thank you for your past assistance on this issue.

Senator CHILES. Thank you, sir.

[The statement follows:]

STATEMENTS OF DR. STEPHEN F. MORIN

Thank you Mr. Chairman for the opportunity to present testimony on one of the most pressing health and mental health issues of the day, namely the Acquired Immune Deficiency Syndrome (AIDS). My name is Stephen F. Morin. I am an Assistant Clinical Professor of Medicine at the University of California of San Francisco and am incoming President of the California State Psychological Association. I am currently involved in a variety of AIDS research programs through the Substance Abuse and Mental Health and AIDS Center (SAMHA) and am a member of the AIDS Budget Task Force of the California State Assembly. I am here today on behalf of the Society for the Psychological Study of Lesbian and Gay Issues, one of the 45 Divisions of the American Psychological Association (APA). This statement, which is endorsed by the APA, focuses on the psychological issues surrounding AIDS including research, counselling and testing, prevention and education.

o **We recommend the funding of the federal AIDS effort at $1.5 billion for research, prevention, and counseling in FY 1988.**

In 1981, the Centers for Diseases Control (CDC) received the first indication of a new disease which compromised the immune system of certain individuals. Since that time, Americans and people around the world have become aware of new and deadly virus which has already irrevocably changed the way we live. While medical descriptions of the diseases associated with AIDS are devastating, it is the epidemiological evidence that transforms this disease into a public health and psychological emergency. Since AIDS first became a reportable disease in 1981, it has affected over 35,000 people in the United States . The U.S. Public Health Service (PHS) projects that AIDS will develop in more than 270,000 individuals by 1991. Equally troublesome is the fact that conservative estimates suggest that 1.5 million Americans may already be infected with the AIDS virus, which is now known as HIV (for Human Immunodeficiency Virus). These statistics have given AIDS the emotional impact of a modern-day plague.

Many of the issues raised by the psychological dimensions of AIDS require continued and extensive investigation. In his FY 1988 budget, the President proposed a modest increase in AIDS funding, primarily for research. This request, however, seemingly ignores the recommendations of the National Academy of Sciences' (NAS) report, Confronting AIDS which calls for the annual federal expenditure of $1 billion for AIDS research and $1 billion for AIDS prevention and education activities by 1991. Recently, in enacting S. Res. 190, the U.S. Senate concurred with the need to fund AIDS efforts in accord with the NAS recommendations. Our recommended expenditure of $1.5 billion in FY 1988 for AIDS programs would be the first necessary step toward reaching that goal.

In many ways AIDS is a disease of behavior, placing great demands on the field of psychology to provide answers to the myriad of behavioral questions that have developed. The manifestation of the disease has severe psychological ramifications that demand successful therapeutic interventions to stabilize the mental health of the infected and sick. The neuropsychological complications brought about by infections of the central nervous system with the HIV virus demands increased attention. The growing evidence that stress can significantly reduce the functioning of the immune system makes psychoneuroimmunolgy one of the important areas for increased investigation and therapeutic design.

Without any immediate prospect for a cure or a vaccine, the only way to stem the tide of infection is through primary prevention. To be effective in the case of AIDS, behavioral scientists must identify mechanisms for promoting sustained behavior change. The design and implementation of public education campaigns and prevention programs must rely heavily on the skills honed by social and behavioral scientists. Similarly, mechanisms for eliminating public prejudice, discrimination and violence born by the fear of this disease must employ basic knowledge from social psychology.

AIDS RESEARCH: The Behavioral Issues

In an effort to reach the National Academy's goal for research, APA encourages support for an FY 1988 AIDS research budget of $550 million. This level of funding would allow the expansion of research in both the behavioral and biomedical sciences at the National Institutes of Health (NIH) and the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) without jeopardizing the other critical research projects.

Because AIDS is a relatively new disease, the number of mental health research issues are rapidly increasing. Although the psychological issues of AIDS are similar to those of any terminal illness, several aspects of an AIDS diagnosis are more troublesome. The unwarranted fear of contagion, the uncertainty surrounding an AIDS diagnosis or HIV infection, the wasting nature of the diseases, the stigma and ostracism which often accompanies this illness and the relative youth of the person with AIDS all serve to insure the unique psychological characteristics of AIDS. Virtually all people with AIDS report that the medical aspects of this disease are adequately dealt with, to the extent that science is able, but that their emotional and psychological concerns are overwhelming. Mechanisms for delivering these services both at the individual level (i.e., therapeutic strategies) and at the aggregate level (i.e., the delivery of mental health services to people infected by the AIDS virus) need continued extensive investigation.

The mental health aspects of AIDS affect not only the people who are harbor the AIDS virus, but also the significant others in their lives. Since most individuals with AIDS are fairly young, their lovers and family are almost never equipped to deal with issues of death. Lovers of persons with AIDS face self righteousness, homophobia, discrimination, fear and legal/administrative impediments as they help their lovers through the last months or years of their lives. For family members, AIDS oftentimes brings the combined information about impending death and about homosexuality or IV drug use. The literature on death and dying, grieving and surviving is growing but the unique issues around AIDS deserve special attention.

Issues surrounding the care of persons infected with HIV have become increasingly complex with the growing awareness that many of the psychological symptoms are caused by direct infection of brain cells with the AIDS virus. It is expected that this condition, now generally termed "AIDS encephalopathy" will affect up to 60% of people with AIDS. The symptoms of this damage, which involves brain atropy and lesions, include forgetfulness, problems in concentration, confusion, loss of ability to function independently, psychomotor problems and deterioration to the point of being bedridden. One particular danger of this condition is the inability to distinguish between AIDS encephalopathy, other neurological infections and the psychological symptoms of life-threatening illnesses. Inappropriate treatment for psychological symptoms may critically delay diagnosis and treatment of some neurological infections. Thus, it is imperative to train mental health professionals about these neuropsychiatric complications.

A relationship between psychological factors such as stress and the progression of AIDS has been suggested. Investigations independent of AIDS research indicate that declines in immune system function occur with heightened stress. These data are consistent with epidemiological findings that show a higher degree of sickness and death in distressed populations (i.e., groups that have experienced natural disasters). A causal relationship has not been scientifically established, however, and it remains uncertain whether modifications in stress will promote good health. The hypothesis appears reasonable from anecdotal evidence and because it bears heavily on AIDS, psychoneuroimmunology must continue to receive strong support.

Dollars for research on the mental health aspects of AIDS have been slow in coming. In 1983, the National Institute of Mental Health was allocating $200,000 to AIDS. By FY 1987 this dollar amount had increased to almost $14 million. NIMH has put its funding to good use supporting investigators who are addressing many of the outstanding mental health questions around AIDS. In order to allow this program to grow we specifically endorse an appropriation of $35 million. This increase would allow NIMH to award 20 new and competing research grants and three new research center grants; fund an urgently needed program of training of mental health professionals; and, continue its program of providing high quality AIDS education materials.

The Committee may also determine that additional funding is necessary for NIMH in order to allow the Institute to conduct several much needed programs, including: demonstration projects on both the maintenance of behavior change and the treatment of AIDS encephalopathy as well as the development of a comprehensive national plan for AIDS-related mental health care.

Thus, we recommend a minimum of:

o **$550 million for the continuation and expansion of AIDS research programs at the National Institutes of Health (NIH) and the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA). $35 million of this amount should be allocated to the National Institute of Mental Health to continue on-going research programs addressing psychosocial issues, neuropsychiatric complications, psychoneuroimmunology and behavior change questions.**

EDUCATION AND PREVENTION

It is clear that our strongest tool in the battle against AIDS is prevention. Prevention in AIDS means behavior change. An extensive body of data exists which shows that changing behavior requires carefully designed approaches. Knowledge can be shared in multiple ways through the schools, through the media, at home and through specialized programs. All of these strategies may have their role and should be explored. Imparting knowledge about AIDS, however, given the anxiety-arousing nature of the disease and the controversy surrounding AIDS is a uniquely difficult mission.

One cannot simply provide factual information and expect that it will be understood or assimilated by all. Psychological resistances to perceiving and understanding the information must be anticipated and addressed in the design of the educational program. Social psychological research has demonstrated that the effectivness of an informational message is affected by the source of the message, its content, the medium through which is communicated, and the psychological characteristics of the audience. Informational messages about AIDS should be designed with appropriate attention to each of these variables.

Beyond education there is a necessity to help individuals change their behavior. Changing people's behavior is difficult, but social and behavioral scientists have had significant success in changing maladaptive behaviors: important examples include altering drug and alcohol consumption as well as smoking cessation. These lessons show that behavior change requires a very special approach with specific programs developed for targeted groups and individuals. This is particularly true with AIDS as there are a variety of special ethnic and minority values around death, dying, sexuality, and substance use.

Education campaigns must also impart information and reduce anxiety and hysteria among the general public. It is clear that the incidence of violence against certain groups is increasing as a function of the AIDS epidemic.

Attempts must be made to obtain a better understanding of prejudice and to address this issue. In addition to understanding how to design programs, the social and behavioral sciences also provide the methodology for evaluating the effectiveness of individual programs and the survey research methods for assessing the knowledge, attitudes and behavior of the American public.

In the area of education and prevention, we recommend:

o $450 million for a package of education and prevention activities with a significant amount of funding being provided to ADAMHA. These institutes have a great deal of expertise in the design of education campaigns for the general public, specific populations and professional groups. Specifically we recommend $100 million for mass media education campaigns; $200 million for programs targeted at individuals at highest risk, with a specific set-aside of two-thirds of program dollars for groups representing target audiences and the other one-third to health departments; $50 million for training and technical assistance for both health and mental health providers; $25 million for research on public education to assess knowledge, and behavior; and the remainder provided for international assistance, public school programs and program management.

COUNSELING AND TREATMENT

The role of the HIV antibody test as part of a national AIDS prevention campaign has been the subject of widespread discussion. At a recent conference sponsored by the Centers for Disease Control (CDC), a policy of mandatory HIV-testing received little support from AIDS experts and local health officers from across the country. At the same time, public health officials voiced support for offering HIV-antibody tests on a voluntary basis to all those who seek family planning assistance, prenatal care, or drug abuse treatment.

We endorse the concept of promoting behavior change through a combination of education and individualized counseling. Education involves providing individuals with information about HIV transmission and risk-reduction. It can be accomplished through a variety of channels including video, print, audio and group/lecture discussion as well as one-to-one interaction between and the educator and the client. Counseling involves the individualized assessment of risk factors, facilitation of effective decision making concerning appropriate behavioral change and resolution of psychological problems raised by this process. Routine education and counseling should be provided to all people who enter clinics for family planning, prenatal counseling, sexually transmitted diseases (STDs), and drug abuse.

In some cases, HIV antibody testing will be an appropriate adjunct to such counseling as a strategy for facilitating behavior change or as a source of information necessary for effective decision making. HIV-antibody testing, however, should be used as an adjunct to such counseling and not the reverse. When individuals are tested for HIV antibodies, it is imperative that special care must be taken to protect privacy and to overcome the psychological issues raised by the testing.

Sufficient funds should be budgeted to provide effective education and counseling. This includes funding for counselor training, outreach, administration, provision of services, and laboratory work. Funds should also be allocated for research to assess the effectiveness of educational and counseling programs. No funds should be provided to any federally funded institution unless the most stringent guarantees are assured for the confidentiality of patient information.

For such a program of education and counseling, we recommend:

o $500 million for a program of counseling and testing of persons in a variety of programs and clinics for family planning, prenatal care, sexually transmitted diseases and drug treatment as well as alternative testing sites. Counseling must always be provided and testing should be offered only after extensive pre-test counseling. The most stringent guarantees of confidentiality of patient records must be assured. Post-test counseling must also be available for all clients.

Mr Chairman, thank you once again for the opportunity of presenting our views on this critical problem. The behavioral sciences offer an enormous variety of skills for meeting the challenge of the AIDS epidemic. With your help, we will begin to unlock the mysteries of this disease and effectively reduce the national pain and suffering due to AIDS.

STATEMENT OF ANN E. McFARREN, EXECUTIVE DIRECTOR, AIDS ACTION COUNCIL

Senator CHILES. Now we will hear from Ann McFarren, executive director of the AIDS Action Council.

Ms. McFARREN. Thank you, Mr. Chairman. It is a pleasure to speak with you and meet you, Senator Weicker, and I want to thank you for your tremendous support and concern for the AIDS issue.

I am fairly new to this particular disease. I have only worked for the AIDS Action Council for about 8 weeks. And I have submitted my written testimony. I would, however, like to take these 3 minutes to share with you some of the things that I have learned as I have gone around the country in the last 8 weeks.

My organization represents 270 service providers. They provide support services and education services throughout the United States to individuals, people with AIDS, their families, and the general community, for education programs.

I am terribly impressed with the work that people are doing, their sensitivity, and their dedication. I am very worried about the amount of work that is being done and the amount of access to funding, particularly in the area of education.

We, for one of the first times in history, know exactly how to prevent a disease from spreading. We have a terrible problem on our hands with people who are HIV infected, and the research support that you have given is beginning to move that research agenda, although at this point we still do not know if or when we will have a cure and whether, in fact, we will ever have a vaccine.

We are making some progress, some drugs seem to be working well. Yet we have a vast number of people who at this point with absolute certainty can never get the disease if they change their behavior, or they understand the ramifications of their behavior and protect themselves.

And yet we have almost no Federal activity that really is on the mark. We have no public education program that really identifies the interest or the information that people need to have, and we have absolutely no strategic programs around the country to address various groups that are at risk in ways that they can hear it and help change their behavior. Until we solve that problem, we are only exacerbating what is already an epidemic, and where we will see many, many people die very, very tragic and painful deaths.

That gets me to the other area that I have seen in the last few months, and my background is nursing, so this has been of particular interest to me. That is the incredible labor intensive and type of medical care that people need when they have AIDS.

We are going to desperately need to change our health care system in order to address these serious problems of health care that are coming up in the future. Thank you, Mr. Chairman.

Senator WEICKER. Ann, thank you very much. Let me just state publicly at the outset, as far as the Congress is concerned, whatever is needed is going to be provided. And that is not a fuzzy message. I realize there is a fuzzy message coming out of the executive branch as to what we are going to do and who believes in what. It is a very confusing situation, when one would expect leadership.

From the Congress, there is no fuzziness at all: whatever is needed is going to be provided.

PREPARED STATEMENT

Ms. McFarren. Thank you very much.

[The statement follows:]

STATEMENT OF ANN E. MCFARREN

Mr. Chairman and distinguished members of the Subcommittee it is a privilege to testify before you today. I am Anh McFarren, Executive Director of the AIDS Action Council. The Council represents 270 community-based groups throughout the United States. They provide direct services for people with AIDS and AIDS Related Complex and their loved ones. They also have developed and provide education programs for their entire communities regarding AIDS and the epidemic.

The Council commends you, Mr. Chairman, and the other members of the Subcommittee for your steadfast commitment over the years to Federal AIDS-related funding. You recognized and acted to resolve this urgent crisis long before the public understood the necessity for action. I particularly commend you for voting a significant increase in AIDS-related funding from 1986 to 1987, and your continued commitment to AIDS research and education at this crucial time. When the history of this epidemic is written -- and let us pray that will be soon -- you will be remembered as far-sighted legislators serving America's health interests in the best tradition of compassionate public service.

Your commitment has helped bring the Federal government, the scientific establishment and this society a long way in the past twelve months towards understanding AIDS. Despite the progress that has been made on scientific, medical, educational and social fronts our society does not yet fully comprehend that AIDS is a long-term reality which requires long-term commitments of funding and determination from all of us.

AIDS has become one of the leading killers in America. Two years ago, when AIDS Action Council testified before you, 10,000 cases of AIDS had been reported. A year ago, when we testified before you again, the number of reported cases of AIDS had nearly doubled to 19,807. Today, that number is almost 35,000. Clearly, to act responsibly today in the interests of the future requires that we sit down -- legislator, bureaucrat, and citizen alike -- and develop a comprehensive plan.

In late 1986 the U.S. Surgeon General and the National Academy of Sciences -- the nation's highest public health officer and its most prestigious scientific body -- released separate reports on AIDS that together called for perhaps the most wide-ranging and intensive emergency actions ever taken against an infectious disease. The serious current epidemic could well become a catastrophe, the reports said, if the spread of the virus that causes AIDS-related infection is not stopped. Among the reports' recommendations:

o massive, continuing public education and prevention programs, particularly in mass media and the schools;

o expanded biomedical and epidemiological research, as well as considerably increased research on a vaccine and treatment therapies;

o optimal organization of health care for patients that is cost-effective, guarantees equal access to care and is mobilized and supported by both the public and private sectors; and

o leadership involvement in efforts to study and control the disease worldwide.

PREVENTION EDUCATION AND RISK-REDUCTION PROGRAMS

RECOMMENDATION: We call upon Congress and the Public Health Service to increase Fiscal 1988 funding for AIDS education, risk-reduction and prevention programs to at least

$450 million (or about 50% of overall FY-88 AIDS spending, and well along the way toward the NAS recommendation of $1 billion for education by 1990) targeted to include:

-- $100 million for mass media education campaigns including but not limited to public service announcements, advertisements, articles, etc., with emphasis on increasing basic knowledge and defusing fear (Britain alone is spending $30 million on such a campaign in 1987, compared to less than $1 million in the U.S.);

-- $200 million for programs targeted at individuals at specific risk, such as women, minorities, I.V. drug users and men who have sex with men, with at least half of these funds being made available directly to groups representing target audiences and the other half to state health departments;

-- $75 million for contributions to international efforts to prevent AIDS through cooperative assistance to the World Health Organization and other countries;

-- $25 Million for public school programs, including development of sex education and other health maintenance curricula, teacher training and technical assistance;

-- $25 million for training and technical assistance for health care providers: physicians, nurses, psychologists, social workers, emergency personnel and hospital, hospice and nursing home personnel, and;

-- $25 million for management of programs, development of materials, technical assistance, policy guidance and evaluation.

BASIC BIOMEDICAL AND OTHER RESEARCH PROGRAMS

RECOMMENDATION: We call upon Congress and the Public Health Service to increase Fiscal Year 1988 funding for basic biomedical, epidemiological, psychosocial and other AIDS-related research programs to a level of at least $550 million, including priority emphasis on the following:

-- Significantly expanded research in virology, immunology and viral protein structure, including enhanced studies in animal modelling, which in turn promote progress toward development of a vaccine and effective drug treatments;

-- Expansion of studies on the natural history and pathogenesis of AIDS, including research on co-factors in infection and disease development, substance abuse and other unexplored epidemiological areas;

-- Significant enhancement of sociological and psychosociological studies on sexual behavior, prevention education, "safe sex," serological testing and other aspects of risk reduction and disease control; and

-- Enhancement of Drug Discovery Programs for the testing of possibly effective treatments, and further development of Treatment Evaluation Units to test these agents. Particular emphasis must be laid here on increased funding for the Food and Drug Administration, which needs to enhance and speed up its drug and biologics approval process.

CARE OF PERSONS INFECTED WITH HIV

RECOMMENDATIONS: We call on Congress and the Public Health Service to assess the current service delivery system, and support adjustment in programs that improve health care services to infected persons.

-- Top priority is an appropriation of $ 60 million to pay for AZT or similar life prolonging drugs for those who can not afford to pay for the drug and do not have access to third party payment sources.

-- We strongly urge the introduction of Federal legislation to create insurance risk-pools that would share the burden of HIV-related health care costs evenly among private insurers.

-- We support HHS Secretary Bowen's proposal to create national catastrophic health insurance, but would amend that proposal to make citizens other than the elderly -- and particularly those suffering from illnesses such as AIDS -- eligible under the catastrophic system.

-- We support legislation to change Medicare eligibility requirements (H.R. 276) to include, prior to the current two-year cutoff point, those diagnosed with AIDS and AIDS-Related Complex.

Thank you Mr. Chairman.

Senator Weicker. Next we have Dr. Robert Petersdorf, the Association of American Medical Colleges. Dr. Petersdorf? I beg your pardon. Just hang on 1 second. We skipped somebody here. Is Katherine McCarter here?

STATEMENT OF DR. ANTHONY ROBBINS, AMERICAN PUBLIC HEALTH ASSOCIATION

Dr. Robbins. I am Dr. Anthony Robbins, sir.

Senator Weicker. I am sorry. Please sit down. And Dr. Petersdorf, you will be next.

Dr. Robbins. I am a past president of the American Public Health Association. I am pleased to be here and if my formal statement may be made part of the record I would appreciate it. Let me say that what you just said, about the Congress making available what is needed is the reason that you and your colleagues have been heroes for the last 6 years and we do appreciate it.

In this statement, the American Public Health Association speaks to four items. To immunization programs, to the sexually transmitted disease programs, to the title X Family Planning Program, and to CDC's Injury Research Program, and there are specific recommendations as to what is needed for those programs.

Let me call your attention to the fact that there are two programs within those groups that do not appear anywhere in the President's budget recommendations, and, therefore, are dependent on your actions in order to make money available.

Last year the Congress enacted a National Vaccine Program. This grew out of the fact that because of the reluctance of industry to invest in new vaccine development the reluctance of Government to spend money in that area, the United States was not getting all the benefit from the new science of biotechnology that should be available for the development and production of vaccines.

This program attempts to coordinate all the activities, Federal, State, and local, and private in the area of vaccine research development, production, use, and the monitoring of the overall immunization program. This is a part of the law that is in place now, while we wait for the revenue part of the vaccine compensation law to be completed in this Congress. That piece needs $20 million this year and $25 million next year in order to operate.

The other piece is a program for injury research and prevention that has been conducted with money provided by the Department of Transportation, and next year there will no longer be any Department of Transportation money for this very useful research that is conducted at the Centers for Disease Control. To continue at the same level where the work has been going on, it needs $10 million a year, as authorized for the next 3 years.

PREPARED STATEMENTS

It is these two programs which particularly need the attention of this subcommittee, because unless you notice them and unless you put the money in, the administration will do nothing in either of the areas.

[The statements follow:]

STATEMENT OF DR. ANTHONY ROBBINS

Mr. Chairman and distinguished members of the Subcommittee, my name is Dr. Anthony Robbins. I am here today as a Past President of the American Public Health Association, the oldest and largest public health society in the world.

Each year, the Association comes before this Subcommittee to seek federal appropriations at a level that will fulfill the government's commitment to preserving the public's health and meeting the nation's special health needs. We believe that disease prevention and early treatment are effective and relatively inexpensive in the long run. Investment in programs which deal with immunizations, AIDS, the Prevention Block Grant, Title X family planning, the control of sexually transmitted diseases and injury prevention and control substantially reduce the expenditures that otherwise would have to be made in the future.

Mr. Chairman, we know that you are familiar with these programs. In the past, you and some of your colleagues in the Senate have assured adequate funding for important public health initiatives. This year we look to you again to preserve and enhance the programs of the Public Health Service.

It is difficult for us to understand why measures that contribute to the public health in a cost effective manner have been singled out year after year for reductions (or even elimination) by the current Administration. The Administration's FY88 budget proposal for health and human services unquestionably undermines the health of our citizens and health care system, with results that would be measured in wasted lives and dollars. The budget deficit must be eliminated, but the Administration's approach to health care is counter productive and fundamentally wrong. Those of us who are involved in the management and delivery of health care and human services are troubled by the abandonment of important public health goals as a result of cuts already enacted and the inadequate increases now being proposed for some vital programs.

While APHA has chosen to focus its attention this year on immunizations, AIDS, the Prevention Block Grant, Title X family planning, the control of sexually transmitted diseases, and injury prevention and control, we believe that at a minimum, all the programs of the Centers for Disease Control should receive an increase for inflation.

Immunization Program

We urge Congress to fund the immunization activities, which include grants to states, funding for the new National Vaccine Program, the vaccine stockpile, and surveillance, research and technical assistance, at $162.3 million.

The Administration's budget argues that we have been 95% successful in our immunization efforts, but the budget request would have provided inadequate funding to complete the job. APHA's funding request of $103.3 million for state project grants would allow States to continue immunizing children at current levels and provide both a soon to be licensed varicella (chicken pox) vaccine and hepatitis B vaccine to immunize infants whose mothers have had hepatitis.

We urge the Subcommittee to provide $25 million in funding for the newly authorized National Vaccine Program. This Program will provide needed focus and direction at the Federal level on the development of both new and improved vaccines. Under such a program, a greater number of manufacturers are expected to enter the vaccine market and a greater number of vaccine products will become available to prevent disease, reduce reactions, and otherwise improve the public's health.

Past shortages of DTP vaccine and potential future shortages of other critically important childhood vaccines point out the need for a complete six month vaccine stockpile. In FY83 it would have cost the federal government $19.9 million to establish a vaccine stockpile with a six month supply of vaccine. Today, due to increases in the cost of vaccine, completion of the same size stockpile will cost $25 million.

It is impossible to overstate the importance of immunizing our youngsters. Vaccines are among the safest, cheapest and most effective ways to prevent infections and communicable diseases. Immunization programs are estimated to return as much as $90 for every dollar spent. The introduction and widespread use of vaccines has resulted in dramatic declines in the incidence of childhood infectious diseases. Immunizing children today is far less expensive than paying for health and welfare costs attributable to childhood illnesses.

Sexually Transmitted Diseases (STD)

America faces an epidemic of sexually transmitted diseases; as many as one in four Americans between the ages of 15 to 55 are affected. In 1985, the number of gonorrhea cases increased for the first time in a decade, penicillin resistant gonorrhea is out of control in certain areas of the U.S., and the incidence of congenital syphilis rose. In 1986, gonorrhea rates stabilized reversing the downward trend of past years. Neglect of traditional STDs has reversed the momentum of the 1970s.

Over 1,000 babies will contract herpes at birth this year. Half of them will die, and half of the survivors will have serious birth defects. There will be approximately 60,000 ectopic pregnancies in 1987, fifty percent of these fetal deaths will be the direct result of sexually transmitted diseases.

CDC currently provides active leadership and support for national efforts directed toward the prevention and control of syphilis and gonorrhea. But there are few federal dollars presently going to chlamydia control, despite the fact that this STD is three times as common as gonorrhea. Chlamydial infections may result in infertility, miscarriage, infections in newborns, and ectopic pregnancy. In 1985, a national strategy to control chlamydial infections was developed. Chlamydia has replaced gonorrhea as the number one bacterial STD, but without sufficient federal funds directed toward its control, the problem will continue to get worse. Dr. Mason, Director of the Centers for Disease Control, testified before Congress that a national chlamydia control program would cost between $50 and $60 million. We urge this Subcommittee to provide $50 million for this purpose.

Despite the emergence of chlamydia, herpes, human papillona virus and the AIDS virus as priority STDs, in real dollars, the federal commitment has declined in the 1980s. Investment in STD control is cost-beneficial. For every $1 put into interrupting transmission of gonorrhea, $3 are saved in health care costs.

We urge you to provide $110 million in funding for the sexually transmitted disease program so that we can begin high risk chlamydia screening and other activities aimed at the control of herpes and human papillona virus. Finally, we ask that you instruct CDC not to reprogram STD resources for the AIDS program, but instead provide separate funds for AIDS activities.

Acquired Immune Deficiency Syndrome (AIDS)

By the end of 1991 there will be approximately 179,000 deaths from AIDS. Most of those 179,000 are already infected today. The World Health Organization has made an estimate that 10 million people are infected with the HIV virus worldwide. The Institute of Medicine recommended that the nation needs to build a $2 billion effort by 1990 if AIDS is to be brought under control.

The Reagan Administration proposed budget for AIDS falls woefully short of meeting the challenges presented by this extraordinary epidemic. Increasing funding for FY88 to a minimum of $970 million would allow for needed education, risk-reduction and prevention programs. In the absence of a vaccine or effective treatment for this deadly disease, our only means of slowing or stopping the spread of infection is through education, risk-reduction and prevention programs that teach people how not to transmit or become infected with the virus. It would also provide needed funding for basic biomedical, epidemiological, psychosocial and other AIDS-related research programs. Lastly, this appropriations level of $970 million would provide funding for some treatment and demonstration programs for AIDS patients.

The Prevention Block Grant

Congress established the Prevention Block Grant in 1982 to provide States with funds for hypertension programs, rodent control, emergency medical and home health services, and a variety of other essential public health activities. The block grant allows states some flexibility in deciding what other public health programs to fund. More and more, states are relying on these funds to pay for critically important public health programs that they would otherwise be unable to provide.

If the Administration had its way, the Prevention Block Grant would be funded at FY85 levels. APHA believes this level of funding - a decrease after inflation -- is totally unacceptable. APHA urges you to fund this program at its authorized level for FY88.

Title X Family Planning Program

Title X of the Public Health Service Act provides the basis for our national family planning clinic network. This program prevents unintended pregnancies, reduces the need for abortion, and provides health services to medically underserved women. Approximately 800,000 unintended pregnancies - 425,000 among teenagers - were averted in one year as a result of the national family planning program.

In 1983, 5 million low and marginal income women received family planning services, including 1.6 million teenagers under age 20. For every dollar spent on teenage family planning services, $3 are saved in health and welfare costs.

In FY81, Congress appropriated $162 million for the Title X program. Accounting for inflationary increases alone, the current level of Title X funding should be over $210 million. Therefore, we strongly urge this Committee to fund the Title X program at its authorized level for FY88.

CDC Injury Prevention and Control Program

Injury is the fourth leading cause of death among all Americans. It causes almost half the deaths of children aged

1-4; more than half the deaths of children aged 5-14, and nearly four-fifths of the deaths of persons aged 15-24. Thus, injury is the leading cause of death among children and young adults.

For more than three decades of life, motor-vehicle crash injuries alone are the leading cause of death. The societal costs of motor-vehicle crash injuries are second only to those of cancer, among the other leading causes of death. Although injuries are responsible for the loss of more economically productive years of life than heart disease and cancer combined, the federal expenditure for research in injury control is approximately one-tenth of that for cancer and less than one-fifth of that for heart disease and stroke.

Substantial progress can be made in the reduction of the incidence of injury and its associated morbidity and mortality if adequate funding, direction, and support are given to a coordinated federal program of injury research. On November 10, 1986, the President signed P.L. 99-649 which authorizes $10 million per year for FY88-90 to support injury control research and other injury prevention activities. We urge this Subcommittee to appropriate $10 million for this critically important public health program.

We look to you to reverse the Administration's strategy; to save money and lives by adequately funding public health programs. These programs are not luxuries that can be eliminated or reduced without major consequences. To the contrary, they fundamentally affect the health and welfare of present and future generations of Americans. It is not even penny wise--and it is certainly pound foolish--to underfund the prevention and early treatment of infectious diseases and other threats to the strength and productivity of our greatest asset, the America people.

Thank you. I would be pleased to answer any question.

STATEMENT OF KATHERINE MCCARTER, VICE PRESIDENT, COALITION FOR HEALTH FUNDING

Mr. Chairman, and members of the committee, my name is Katherine McCarter. I am Associate Executive Director of the American Public Health Association and the volunteer Vice-President of the Coalition for Health Funding.

The Coalition for Health Funding, on whose behalf I am testifying today, is composed of some 40 national health organizations that represent voluntary health agencies, consumers and providers of health services and the institutions that train health professionals and others. The thread that unites these diverse groups is an overriding concern for the research, service and training programs stewarded by the U.S. Public Health Service ("PHS").

The Coalition is extremely grateful for the support that the Chairman and members of this committee have shown for the programs that comprise the PHS. These programs which range in mission and character from biomedical and behavioral research to assistance for students in all areas of health professions education are the backbone of our system of health promotion and disease prevention and treatment.

Although, as we have recognized in recent years, the exigencies of the federal deficit make it important for this committee to allocate its resources wisely, we believe that the PHS programs continue to represent an unsurpassed investment in the future of the citizens of this country. And nothing demonstrates more acutely the need for the Congress to continue to support PHS programs than the AIDS crisis.

AIDS has challenged virtually every facet of the PHS. Specifically, while the National Institutes of Health ("NIH") pursues vigorously treatments and eventually a cure for this disease the Alcohol, Drug Abuse and Mental Health Administration ("ADAMHA") is studying its behavioral aspects. The Centers for Disease Control ("CDC") has been the source of epidemiological data by which the spread of AIDS has been tracked and monitored, and CDC has been in the forefront of the PHS' efforts to institute public health measures to halt the progress of AIDS among high risk populations. The Health Resources and Services Administration ("HRSA") has also allocated some resources to train health professionals to understand and care for patients afflicted by AIDS.

This unprecedented response by a variety of PHS agencies to the AIDS emergency would not have been possible if the Congress had not maintained these programs at a level of funding that allowed them to remain fully responsive. Although year after year the administration has recommended major cutbacks in these programs, and even the elimination of some, this committee has resisted its importunings. The result is that the PHS continues to carry out its myriad responsibilities and initiatives and is ready to respond to any sort of national health emergency.

Our praise for this committee and the PHS is not meant to obscure the fact that many programs are underfunded or could make even greater strides if provided with increased appropriations. The health service programs in particular, Community and Migrant Health, Maternal and Child Health and Family Planning continue to be faced with an increase in patient needs that can only be addressed if there are sufficient funds. And our potential for biomedical and behavioral research breakthroughs is seemingly limited only by our investment of funds. Funding for health professions training has dropped dramatically since 1979. Thus, nursing education, public health, health administration, student assistance and primary care programs have been limited in their ability to respond to emerging needs and priorities by a lack of available funds, e.g. the nursing shortage. We hope that in FY 1988 this trend can be reversed and funds appropriated to ensure real growth in all the PHS programs, including health professions. Finally, the many programs funded under the auspices of the PHS that focus their efforts on preventing disease and disability merit special attention and commitment because they have the greatest potential to save health dollars and, most importantly, lives.

Mr. Chairman, attached to our testimony is a list of needs and programs that members of the Coalition believe merit special attention by this Subcommittee and additional resources. Again, Mr. Chairman, on behalf of the Coalition I thank you for your leadership and concern for the many programs that comprise the PHS. I would be pleased to answer any questions that you might have.

- There continue to be shortages in a variety of public health occupations including: toxicologists, biostatisticians, nutritionists, behavioral scientists, public health nurses, and epidemiologist knowledgeable about non-infectious and new-generation diseases.

- The Maternal and Child Health Block grant which serves as the primary provider of preventive health care and maternal and child health services for an important segment of the population must have additional resources if it is to meet the demand its services generate.

- The Childhood Immunization program which provides vaccines for millions of children is in need of priority funding if it is to attempt to keep pace with the skyrocketing cost of childhood vaccines.

- The National Institute of Child Health and Human Development which focuses its research efforts on combating and curing birth defects, premature birth, mental retardation, learning disabilities, and Sudden Infant Death Syndrome, among areas of concern, cannot pursue vigorously this important area of biomedical research unless adequate funding is made available by the Congress.

- The Preventive Health and Health Services block grant is the only source of funding for a variety of state initiated prevention activities. The block grant provides the states with the flexibility they need to create new and innovative programs to effect positive health outcomes, and thus demands special attention in terms of funding.

- In view of the expanding services that we provide to persons with developmental disabilities, there is a great need to provide more resources to assure that physicians (especially pediatricians) and other health professionals are adequately trained to respond to the special needs of these handicapped children.

- Support for family planning has never reached a level commensurate with the need for these services. Additional funds are needed if family planning clinics are to maintain their current level of services (hours of operation, staffing levels and low cost to indigent patients) and serve the millions of sexually active teenagers that cannot otherwise obtain medically supervised reproductive health care.

- There is a pressing and unmet need to educate the public as to the health risks associated with the use of smokeless tobacco products.

- Greater support is needed for the nursing research fellowships for pre-doctoral and post-doctoral studies. The Institute of Medicine Report on Personnel Needs and Training for Biomedical and Behavioral Research recommendations indicate a severe shortage of nurses prepared at the doctoral and post-doctoral level and the National Research Service Awards provide a major source of support to nurses seeking advanced research preparation.

COALITION FOR HEALTH FUNDING MEMBERSHIP

American Academy of Pediatrics
American Association for Dental Research
American Association of Colleges of Nursing
American Association of Colleges of Osteopathic Medicine
American Association of Colleges of Pharmacy
American Association of Colleges of Podiatric Medicine
American Association of Dental Schools
American Association of University Affiliated Programs for the Developmentally Disabled
American Dental Association
American Heart Association
American Lung Association
American Nurses' Association
American Optometric Association
American Psychological Association
American Public Health Association
Association of American Universities
Association of American Veterinary Medical Colleges
Association of Physician Assistant Programs
Association of Schools of Public Health
Association of State and Territorial Health Officials
Association of University Programs in Health Administration
Citizens for the Treatment of High Blood Pressure
Cystic Fibrosis Foundation
Infectious Diseases Society of America
March of Dimes Birth Defects Foundation
National Association for Biomedical Research
National Association for Music Therapy
National Association of Childrens Hospitals and Related Institutions
National Association of Community Health Centers
National Association of State Universities and Land Grant Colleges
National Council Against Mental Illness
National Family Planning and Reproductive Health Association
National Health Education Committee
National League of Nursing
National Student Nurses' Association
New York State Committee for the Treatment of High Blood Pressure
Planned Parenthood Federation of America
Society for Investigative Dermatology

Senator WEICKER. The program under the Centers for Disease Control—I am not familiar with that one. What, specifically, is that supposed to accomplish?

Dr. ROBBINS. This focuses primarily on traffic deaths, where a great deal of improvement can take place. The costs of these injuries are very large.

They are second only to cancer among the leading causes of death. And this is an attempt to learn how to prevent highway injuries and deaths, and it is work that has been carried out at the Centers for Disease Control, and carried out as I say under an agreement with the Department of Transportation.

The Department of Transportation will no longer be funding this program starting next year.

Senator WEICKER. Thank you very much. We appreciate it. Dr. Robert Petersdorf of the Association of American Medical Colleges.

STATEMENT OF DR. ROBERT G. PETERSDORF, PRESIDENT, ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Dr. PETERSDORF. Thank you. Good morning, Senator Weicker. My name is Robert G. Petersdorf, and I am president of the Association of American Medical Colleges.

The AAMC serves as the national voice for the 127 American medical schools and their students, 435 major teaching hospitals, and 35 academic and professional societies. Our message to the subcommittee is straightforward.

The Federal Government should be committed to sustained support for research and education as an investment in our country's future, and to ensuring that our Nation's poor and elderly have access to quality health care regardless of their ability to pay. These commitments should not be unduly compromised by prevailing economic conditions, less decisions focused on the short term have severe economic and societal repercussions later.

Before addressing specific fiscal year 1988 funding issues the AAMC would like to thank and commend the subcommittee for its efforts in reversing the administration's premature implementation of its proposal to extend the availability of $334 million fiscal year 1987 NIH funds into 1988.

The AAMC supports the fiscal year 1988 recommendations of the ad hoc group for medical research funding. This proposal embodies the first step in a 5-year plan and allows NIH and ADAMHA to pursue more of the research opportunities evident in the variety of fields.

The group's proposal of $7.69 billion for NIH and $590 million for ADAMHA provides for a balanced expansion in all of the support mechanisms used by these agencies. The proposal permits award rates for research project grants to increase to 38 percent for NIH and 40 percent for ADAMHA. In fact the ad hoc group believes that an award rate of about 50 percent is ultimately appropriate.

The ad hoc group's proposal generally requests increases of all the NIH's mechanisms proportional to the expansion and research project grants. There are other areas where additional strengthening is desirable, such as research training, instrumentation, and research facilities. These will play a key role in developing the research infrastructure needed to meet the 5-year goals.

Restoring DHHS's lapsed statutory authority to provide grants for the construction and renovation of research facilities is also top priority for the AAMC. The AAMC opposes the administration's request for the budget authority to meet the out-year commitments of fiscal year 1988 competing research project grants. The current practice of annually appropriating funds to meet each year's commitment base has worked well over time and has no inherent systemic deficiencies.

In the area of student financial assistance, it is important that those programs targeted to financially disadvantaged and minority students be funded as generously as the law will permit. The association, therefore, recommends full funding for exceptional financial need, scholarships, and the Disadvantaged Assistance Program.

The health training programs contained in title VII of the Public Health Service Act should generally be funded at current services levels. These programs expose medical students to areas of national need, such as geriatrics, prevention, and primary care. We also urge support for the two geriatric authorities in section 788.

PREPARED STATEMENT

I appreciate the opportunity to deliver this statement. Once again we applaud this subcommittee for its past understanding and generosity.

Senator WEICKER. Thank you very much, Dr. Petersdorf. We appreciate your testimony.

[The statement follows:]

STATEMENT OF DR. ROBERT G. PETERSDORF

The Association of American Medical Colleges (AAMC) appreciates this opportunity to state its views on FY 1988 appropriations for the Department of Health and Human Services (DHHS) and the Department of Education (ED). The AAMC serves as the national voice for the 127 U.S. accredited medical schools and their students; 435 major teaching hospitals; and 85 academic and professional societies whose members are engaged in teaching, biomedical and behavioral research, and patient care.

Our general message to the Subcommittee is straightforward: the Federal government should be committed to the policies that continued investment in research and education is an investment in our country's future, and that our nation's poor and elderly should have access to quality health care regardless of their ability to pay. These commitments should not be unduly compromised by prevailing economic conditions, lest decisions focused on the short-term have severe economic and societal repercussions later.

Before addressing specific FY 1988 funding issues, the AAMC would like to thank and commend this Subcommittee for its efforts in reversing the Administration's premature -- and, in our opinion, flagrantly illegal — implementation of its proposal to "extend the availability" of $334 million of FY 1987 NIH funds into FY 1988. This action had immediate repercussions for ongoing research and serious long-term implications for the integrity of the processes by which Congress authorizes the expenditure of funds.

The Administration's proposed FY 1988 funding levels for NIH and ADAMHA research and research training reflect its traditional lack of enthusiasm for biomedical and behavioral research, an attitude that is doubly disturbing given the Executive Branch's general recognition of the value that basic research and development has to our economy, trade balance, and productivity. For FY 1988, the Administration proposes new budget authority for NIH of $5.534 billion, almost 10.6% below the FY 1987 level. ADAMHA research and research training would receive a 3.0% cut from the $473.9 million provided for the current fiscal year. The NIH budget would result in only about 2,000 competing project grants being awarded in FY 1988; award rates would drop from 35.4% to about 10%. These dramatic reductions would not only thwart the pursuit of new opportunities in the health sciences, they would drastically diminish the attractiveness of careers in health research.

The AAMC fully supports the FY 1988 recommendations of the Ad Hoc Group for Medical Research Funding. This proposal, which embodies the first step in a 5 year plan, allows NIH and ADAMHA to grasp a larger percentage of the attractive research opportunities that are evident in a variety of fields -- in genetics, cellular biology, oncology, immunology, and other areas. The Group's proposal of $7.69 billion for NIH and $590 million for the research and research training components of ADAMHA provides for an orderly, balanced expansion in all of the support mechanisms used by these agencies. The proposal would permit award rates for the keystone of Federally-supported medical research, the research project grant, to increase to 38% for NIH and 40% for ADAMHA. In fact, the Ad Hoc Group believes that an award rate of about 50% is ultimately appropriate, even though it may be fiscally unrealistic at this time. However, the 5 year plan has been constructed to attain this level of support in FY 1992. The Group is encouraged that the President has proposed a similar 5 year expansion for the programs of the National Science Foundation; equivalent growth is every bit as appropriate for NIH.

The Ad Hoc Group's proposal generally requests increases for all of NIH's support mechanisms proportional to the expansion in research project grants; these include research centers (special, clinical, and biotechnology), clinical trials, biomedical research support grants, contracts, and primate centers, to mention just a few. There are other areas where additional strengthening is desirable, as they will play a key role in developing the research "infrastructure" that is needed to meet the 5 year goals. Research training would receive a major boost, both to recruit more individuals into the training pipeline -- about 12,500 at NIH, and 1,543 at ADAMHA -- and to allow for a much-needed increase in National Research Service Awards (N.R.S.A.) stipends. The small instrumentation grant program would be significantly expanded. Also, we ask that Congress address the pressing need for the renovation and replacement of facilities, both animal and research. For the former, the Ad Hoc Group requests that $50 million be provided in FY 1988. Regrettably, DHHS currently lacks statutory authority to provide grants for the construction and renovation of research facilities; restoring such authority is a top priority for the AAMC. Finally, the budget of the General Clinical Research Centers (GCRC) program deserves special emphasis, as it provides vital support for patient research conducted through research project grants.

There are also a number of issues that do not relate directly to individual appropriations accounts but which have an important impact on the quality of Federally-supported research. First, adequate funding of grants should always take precedence over funding any prescribed number of grants. Also, NIH and ADAMHA must have the staff and the administrative flexibility to use resources as efficiently as possible. This Subcommittee is urged to ensure appropriate NIH and ADAMHA staffing levels, and that the apportionment process is not abused by the Office of Management and Budget.

The AAMC opposes the Administration's request for the budget authority to meet the outyear commitments of FY 1988 competing research project grants. The current practice of annually appropriating funds to meet each year's "commitment base" has worked well over time and displays no inherent, systemic deficiencies.

In the area of student financial assistance, it is important that those programs targeted to financially disadvantaged and minority students be funded as generously as the law will allow, so that the specter of debt will not deter them from pursuing careers in medicine. The Association recommends that Exceptional Financial Need (EFN) scholarships receive $7.0 million and the Disadvantaged Assistance program (which in turn funds Financial Assistance to Disadvantaged Health Professions Students) get $30 million. It is imperative that the HEAL program receive the fully authorized credit ceiling of $305 million. The Guaranteed Student Loan (GSL) program is essentially an entitlement one whose expenditures cannot be controlled through the appropriations process, but the AAMC recognizes its overwhelming importance to medical students and applauds the recent increase in the graduate and professional student annual maximum to $7,500.

The health training programs contained in Title VII of the Public Health

Service Act (P.H.S.A) should generally be funded at current services levels, which in most cases is slightly below the authorized level. These programs facilitate exposure of those in the training pipeline to areas of national need, such as geriatrics, prevention, and primary care. The programs also encourage minority participation in medicine. Title VII will undergo a comprehensive review next year in the reauthorization process; in the meantime, funding at current policy levels is warranted. In FY 1988, we request that $11 million be appropriated for geriatric education centers, so that all the grants awarded in the last few fiscal years can be continued and that a few new centers that are still needed in some parts of the country can be added. Also, the recent geriatric training initiative contained in section 788(e) of the P.H.S.A. should be funded at a level of $6.0 million for physician fellows and advanced trainees.

The Administration has once again proposed to limit Federal matching payments to Medicaid by placing a cap on expenditures. At a time when approximately 35 million Americans have no health insurance and the unemployment rate remains high by historical standards, any reduction in Medicaid funding would be tantamount to turning our backs on the nation's poor and disadvantaged. Nothing less than full funding is warranted.

The AAMC appreciates the opportunity to submit this statement. Once again, we congratulate this Subcommittee for its past insightful generosity.

STATEMENT OF DR. BARRY R. BLOOM, PRESIDENT, FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

Senator WEICKER. Barry Bloom, president of the Federation of American Societies for Experimental Biology.

Dr. BLOOM. Senator, a contemporary African playwright has written that all men cry for the same reasons. They cry because they are sick, they cry because they are dying, and they cry because they grieve their loved ones.

I represent seven major scientific societies in the Federation of American Societies for Experimental Biology, representing 28,000 working laboratory scientists who are dedicated to the prevention and amelioration of disease and suffering.

My name is Barry Bloom. I am professor and chairman of the department of microbiology and immunology, the Albert Einstein College of Medicine in New York, and I greatly appreciate the opportunity to provide testimony to this committee.

We are profoundly grateful for the commitment and strong and continuing support of this committee of biomedical sciences. We are pleased that the Senate Appropriations Committee has rejected the effort to carry over funds and to restrict the wishes of Congress and the people to provide a strong and sustained basis for research. We need this if we are to get our brightest young people engaged in the commitment to this enterprise.

We join the ad hoc group in medical research funding in recommending for the National Institutes of Health $7.5 billion in new and continuing grants, which still represents only 38 percent of all the scientifically approved applications to be awarded. And there will still be many that are not able to be funded.

The federation would urge you to consider the citation of the need for 7,000 new and competing grant awards in the language of the appropriation law to ensure that the wishes of Congress will be followed by the administration and to maintain the momentum which we have.

We recommend that the funding of ADAMHA be given at the level of $590 million, funding 770 new and competing research grants with an award rate there of 40 percent, which would include support for 1,300 trainees recommended by the National Academy of Sciences.

We appreciate your understanding that practical advances in understanding disease are built on a long-term investment in basic research. I would remind you that biotechnology industry derives from arcane studies on simple viruses that make bacteria sick and die. I would also point out that the basis for the research program on AIDS depended on years of support of tumors and leukemias in mice.

We believe that none of us is smart enough to know what knowledge is most relevant in the long run, and we urge you to continue your support for a broad base in the scientific enterprise.

PREPARED STATEMENT

Senator **Weicker**. Thank you very much, Barry. I also see you are accompanied by Gar Kaganowich, who was with this committee for many, many years and I might add that he lent his valuable assistance to formulating our health program. So you are in good company there, and I very much appreciate the nature and the quality of your testimony.

Dr. **Bloom**. You are very kind.

[The statement follows:]

STATEMENT OF DR. BARRY R. BLOOM

Mr. Chairman and members of the subcommittee, thank you for this opportunity to testify on the fiscal 1988 budget request for the National Institutes of Health and the Alcohol, Drug Abuse and Mental Health Administration. I am Barry R. Bloom, President of the Federation of American Societies for Experimental Biology (FASEB), a federation of seven scientific societies with 28,000 working scientists as members. I am also chairman of the Department of Microbiology and Immunology at the Albert Einstein College of Medicine in New York.

We are profoundly thankful to this subcommittee for its strong and continuing support of biomedical research. This year's NIH appropriation of almost $6.2 billion, a 17% increase, was a tremendous vote of confidence in that agency and its remarkable achievements. We also are grateful for your recognition of the role played by the individual scientist and commend the Subcommittee for its decision to support no fewer than 6,200 new and competing research project grants. Your action not only was generous, but evidence of your appreciation for the long-term payoffs of basic biomedical research and the essential role the federal government must play in it.

Only the federal government can sustain the long-term commitment of dollars necessary to ensure that the humanitarian work of the NIH and ADAMHA, carried out by thousands of dedicated scientists in universities and research institutions throughout the U.S., will continue and will pay dividends in the future. Today we are reaping the benefits of the federal science investments made ten, twenty or thirty years ago. Years from now we will see the results of the investments made this year.

The issue was well put by NIH Director James Wyngaarden in recent congressional testimony. Commenting on the rapid progress science has made in understanding the AIDS virus, he said: "We have only known about it for five years, but progress has been astounding. The reason for this is that we were poised because of years of prior work."

Investment in basic life sciences research has also led to the creation of entire industries that enhance the U.S. competitive edge--witness the transformation of biotechnology from a research technique for examining life at the genetic level into a growing and creative industry. Dr. Wyngaarden noted in congressional testimony that a significant portion of the growth and success of biotechnology is due to the fundamental work on genetic techniques performed by NIH investigators in the 1950s and 1960s. "Because of a large investment in undifferentiated science at that time," Dr.

Wyngaarden said, "these techniques now undergird all aspects of science and are part of everyday research."

The Administration's battle cry this year is "competitiveness." Yet the President's budget proposals for fiscal 1987 and 1988 would erode the U.S. competitive edge in biotechnology and undermine the principle of building a science base that makes rapid progress against disease possible. Under its proposals, the Administration is requesting that fiscal 1987 NIH support be reduced by shifting $334 million and 700 new and competing research grants into fiscal 1988. The budget request for fiscal 1988 is for only $5.5 billion in new money, an 11% cut from the FY 87 appropriated level.

The transfer, or "carryover", of NIH funds from one fiscal year to the next requires congressional approval. But, as you know, the Administration began making cuts in FY 87 NIH grant levels even before Congress had a chance to act on the proposal. Under pressure from the public, including the scientific community, OMB and NIH have put a stop to the unauthorized cuts. We note, however, that the cuts sent yet another discouraging signal to both established scientists and young people entering the field that federal research support, even when mandated by Congress, can be subject to ill-considered budget-cutting at the highest levels of government. These forays against life sciences research must cease.

We urge this Subcommittee to reject the Administration's "carryover" request in the context of the FY 1987 Supplemental Appropriations Bill and we are hopeful that Congress as a whole also will do so in short order.

The essential work of NIH and ADAMHA, aimed at developing new scientific knowledge that will aid in the treatment and cure of disease, will suffer if subjected to cuts such as those proposed in the President's FY 1988 budget. The knowledge deficit created when promising scientific opportunities go unexplored because of inadequate funding doesn't affect just one discipline; the loss ripples through basic science in the form of other discoveries not made, human suffering not alleviated and health care dollars not saved. At a time when we are faced with such public health crises as AIDS, we cannot afford to ignore the potential benefits of basic biological research.

We also urge the rejection of the Administration's proposal for a separate appropriation of $2.7 billion to cover the second and third year costs of the new and competing grants that will be funded in FY 1988. The future costs of grants are difficult to predict, yet the Administration proposal would arbitrarily lock in the size of second and third year awards at a level that barely allows for the cost of inflation. The NIH research budget must remain flexible enough to, for example, accommodate the investigator whose work takes an unexpectedly promising turn and needs additional funding. We view the Administration's proposal as unnecessarily restricting and, quite frankly, one more attempt to cap the number and size of individual investigator-initiated grants, the cutting edge of research.

We join with the Ad Hoc Group for Medical Research Funding, a coalition of more than 150 scientific and health-related organizations, in recommending FY 1988 budgets for NIH and ADAMHA that are keyed to the research opportunities now available in the life sciences.

For NIH, we recommend a fiscal 1988 funding level of $7.5 billion and the support of approximately 7,000 new and competing research grants, an award rate of about 38%. Even at this rate, much excellent research is going unfunded and many opportunities will not be explored. The Ad Hoc Group views a $7.5 billion funding level as the essential first step in a five-year strategy toward funding roughly half of all approved research project grant applications. We at the Federation separately urge the Subcommittee to cite the number of new and competing grants in the appropriations law itself in order to ensure that the Administration follows Congress' wishes as to the level of new research to be supported. Our Ad Hoc Group proposals would also allow for strengthened programs in the areas of research centers, clinical trials, biomedical research support grants, cooperative clinical research and intramural research.

Special emphasis would be given to the support of an increased number of research trainees, increased funding for research instrumentation and renovation of deteriorating research and animal facilities. The problem of decaying research facilities is particularly crucial and we support the inclusion in the appropriation of an additional $200 million for repair, renovations and replacement, but not for new facilities.

For the research and research training activities of ADAMHA we recommend a funding level of $590 million, a level which would provide needed expansion in all facets of the ADAMHA research mission and fund approximately 770 new and competing research grants, an award rate of about 40%. This proposal would also allow for the support of 1300 research trainees, as recommended by the National Academy of Sciences, as well as the renovation of laboratory space and needed funding boosts for research centers and research career development awards.

Mr. Chairman, we firmly believe that the means of coping with terrifying and implacable diseases such as AIDS, the revelation of their secrets and the development of vaccines or cures, ultimately will emerge from the work of individual investigators in basic biology.

We urge the subcommittee to affirm its continued support of NIH and ADAMHA with a national investment in biomedical research that allows early exploitation of research opportunities that hold the key to reduced human suffering and improved human health. As working scientists, we assure you that your support, particularly of the individual investigator-initiated research grant, is not only essential to our work, but the reason we have been so successful in our efforts.

I would be happy to answer any questions you may have.

STATEMENT OF MILTON GOSSETT, THE LASKER FOUNDATION

Senator WEICKER. Next is Milt Gossett of the Lasker Foundation.

Mr. GOSSETT. Thank you, Senator. Reading from prepared scripts is not one of my strengths. However, because of the importance of the message I will do my very best.

Thank you for the opportunity to be here before you today. I know you have a tremendous task in helping to decide what should and should not be funded.

I am Milt Gossett, and I am an advertising man with Saatchi & Saatchi Compton Worldwide. As a board member of the National Center for Health Education and as a citizen I am concerned about the health of the people of this country.

Unlike other witnesses that will appear before you today, I seek support for health education and promotion programs. I do not diminish the importance of medical research. In fact, I view a strong education program as a part of a comprehensive medical research effort.

Let me give you some examples of areas which I believe need either new or increased support. Several prevention education efforts are administered and coordinated by the Heart, Lung, and Blood Institute. One is the National High Blood Pressure Education Program started by a great lady, Mary Lasker.

Fifty million Americans have high blood pressure, and Americans are now very familiar with the danger of uncontrolled high blood pressure. High blood pressure is the major cause of stroke, and the death rate for stroke has declined by more than 50 percent during the life of this national education program.

With more than 40 million Americans having elevated blood cholesterol, a program in that area represents another opportunity for the Institute and its partners to make a new and important contribution to the prevention of heart disease.

To help assure a safe and adequate supply of blood in the United States, a major educational effort called the National Blood Resources Education Program is being established. Among the population that this program will benefit are the nearly 4 million Americans who receive blood transfusions annually.

The resources which support these Heart Institute efforts are drawn from two funding categories. The research and development contract line, and the research management and support category. Over the past few years these categories have been severely restricted, and the Institute is limited in the support it can provide to these major educational efforts.

With new funding all Institute directors must also have the flexibility to use funds where they will do the most good. Another area which has to be mentioned again and again is AIDS education in both the professional and lay community at the NIH, the ADAMHA, and the CDC.

I am very proud to say and I would like to step out of the script for just a minute to say that our company has volunteered to deliver an AIDS educational advertising program to the city of New York. That program has been just about completely developed for all media, has been approved by the mayor of New York City, and is about to be launched.

To give you some idea of the importance with which industry, the private sector, views this, we have already raised $1.5 million from the private sector to fund this campaign, although it was originally designed to be a pro bono campaign. This is just the beginning.

I think these kind of efforts, with the Government behind it, will be so far ahead in terms of support that it becomes increasingly important to take advantage ofthis wave of support.

Another area which, I get so carried away that I lost my place.

Senator WEICKER. That is all right, you have 1 minute to find it. [Laughter.]

Mr. GOSSETT. Thank you very much. That really settles me down.

As the director of the eye bank for the city of New York I know that among the unsolved health problems facing this Nation, one of the most important is the control and prevention of blinding eye disease. It is particularly tragic when someone goes blind simply because of a lack of education or knowledge.

Blinding and disabling eye disease costs our Nation more than $16 billion a year in health care and other costs. Each year another million people suffer uncorrectable visual impairment. Unfortunately, the findings of research often do not reach the patients and physicians that need them.

To close this gap and ensure that sight-saving research findings are put to the fullest possible use, there is a need for new programs of eye health education. Such programs should emphasize eye diseases that can be effectively combatted through wider dissemination of knowledge gained from research.

Two such diseases that merit particular attention are glaucoma and diabetical retinopathy. Specifically, about 2 million Americans are known to have glaucoma. And it is estimated that another million have the disease but are unaware of it.

The new program would convey information about the insidious nature of glaucoma and the fact that it can only be detected through an eye exam, and then effectively treated. It does little good to do research if we do not implement the findings.

The messages of the program would be conveyed through public education materials, the mass media, and media targeted at health care professionals. The importance of learning about health does not begin or end with our schooling, rather it continues throughout life as our health concerns change. We all need to learn what healthful habits are and how to incorporate them in our lives.

There is another area to be addressed.

PREPARED STATEMENT

Senator WEICKER. Milt, I am going to have to include your entire statement in the record, but we have a rather strict time rule here which is being applied to everyone else and I am afraid we are going a little bit over. So if you could wind up, I would appreciate it.

Mr. GOSSETT. I will be pleased to. I will just cut through one page and say that while above all health education plays a significant role in helping people stay well and achieve the vitality that we have come to believe is our birthright as Americans, I urge you to include funds and report language for the programs I have mentioned, as well as other areas where opportunities exist. And thank you very much for listening to me.

[The statement follows:]

STATEMENT OF MILTON GOSSETT

It is a great honor for me to appear before you today. I sit in awe of my surroundings but even more in awe of the tremendous task you have before you in helping to decide what should or should not be funded.

My name is Milt Gossett and as a businessman, with Saatchi & Saatchi Compton Worldwide or as a board member of the National Center for Health Education or as Mr. Citizen, I am concerned about the health of the citizens of this country.

Unlike all of the other witnesses that have and will appear before you today I seek support for health education and promotion programs. I do not, in anyway, diminish the importance of medical research - - in fact I view a strong education program as but a part of a comprehensive medical research effort.

Senator Warren Magnuson used to say the "medical research was the first link in the chain of prevention." I would suggest that health education and promotion is the glue that binds it all together.

Allow me to give you examples of areas which need either new or increased support.

Several prevention education efforts are administered and coordinated by the Heart, Lung, and Blood Institute. One is the National High Blood Pressure Education Program which was started by a great lady, Mary Lasker. Fifty million Americans have high blood pressure and Americans are now very familiar with the dangers of uncontrolled high blood pressure. High blood pressure is the major cause of stroke, and the death rate for stroke has declined by more than 50 percent during the life of this national education program.

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United States, a major educational effort called the National Blood Resources Education Program is being established. Among the population that this program will benefit are the nearly 4 million Americans who receive blood transfusions annually.

The resources which support these Heart Institute efforts are drawn from two funding categories--the Research and Development contract line and the Research Management and Support category. Over the past few years, these categories have been severely restricted and the Institute is limited in the support it can provide to these major educational efforts. With new funding, all Institute directors must have the flexibility to use funds where they will do the most good.

What I am pointing out is not a definitive listing of what programs are crying out for more help but examples of where funding can and will make a big difference.

Another area which has to be mentioned again and again is AIDS education in both the professional and lay community at the NIH, ADAMHA and CDC. I am proud to say that Saatchi & Saatchi Compton's aids prevention and education community program has been endorsed and approved by the Mayor of New York City and his Commissioner of Public Health.

As a Director of the Eye Bank for the city of New York, I know that among the unsolved health problems facing this Nation, one of the most important is the control and prevention of blinding eye disease.

It is particularly tragic when someone goes blind simply because of a lack of education or knowledge.

Blinding and disabling eye diseases cost our nation more than $16 billion a year in health care and other costs. Each year another million people suffer uncorrectable visual impairment. Unfortunately, the findings of research often do not reach the patients and physicians who need them. To close this gap, and ensure that sight-saving research findings are put to the fullest possible use, there is a need for new programs of eye health education. Such programs should emphasize eye diseases that can be effectively combatted through wider dissemination of knowledge gained from research. Two such diseases that merit particular attention are glaucoma and diabetic retinopathy.

Specifically, about two million Americans are known to have glaucoma, and it is estimated that another million have the disease but are unaware of it. The new program would convey information about the insidious nature of glaucoma and the fact that it can only be detected through an eye examination and then effectively treated. It does little good to do the research if we don't implement the findings!

The messages of the program would be conveyed through public education materials, the mass media, and media targeted at health care professionals.

The importance of learning about health does not begin or end with our schooling; rather it continues throughout life, as our health concerns change. We all need to learn what healthful habits are and how to incorporate them in our lives.

Almost 30 million Americans suffer from alcohol, drug abuse, or mental disorders. The cost of these disorders is tremendous: over $200 billion annually and over 108,000 deaths.

The presence in the general medical sector of patients with mental and substance abuse disorders is undisputed. Research has shown that more than half of all patients with these disorders are seen exclusively by general health care providers and that they use general health care resources at a rate double that of patients without mental or substance abuse disorders. But how effectively are the real problems being identified and treated?

We know that medical schools, with their curriculum already jammed full, typically devote less than 1% of required teaching hours to an integrated approach to alcohol and drug abuse, and very few schools require any clinical experience in these disorders. The results are what might be expected. A 1984 survey found that only 27% of practicing physicians felt competent to treat alcoholism. For diseases such as depression, for which effective treatment is readily available, care provided may be inadequate. In one study of patients whose depression was being treated by non-psychiatric physicians, 58% were being prescribed antidepressant medications, but at subtherapeutic levels.

Physician attitudes may also be a barrier to appropriate care. A survey of 90 randomly selected physicians and medical students in a large, urban teaching hospital found that over 40% did not consider drug abuse a disease.

Tapping the power of the advertising industry to address these problems in a systematic and sustained manner will yield untold benefits. We can combat the stigma associated with these disorders by informing the public of the signs and symptoms of these disorders and getting the word out that treatment is available.

In a democracy like the United States, education represents a means that equips individuals to make appropriate choices that will ultimately achieve behavior change and a healthy and more productive society.

The state of the nation's health poses new and continuing challenges. Every daily paper testifies to the many causes of poor health and premature death that education can help prevent: smoking, drug, and alcohol abuse; teenage pregnancy; and **AIDS** are only the beginning of the list. In each of these cases, education has a vital role to play.

While health education is most commonly associated with reducing behavioral risk factors that lead to the onset of such chronic diseases as heart disease, cancer, stroke, and respiratory ailments, it can work to help prevent diseases such as Aids, and other sexually transmitted diseases.

Yet above all, health education plays a significant role in helping people stay well and achieve the vitality that we have come to believe is our birthright as Americans. Notably, health education programs for school children and employees have demonstrated that health education saves money and lives, encourages productivity, and promotes good health.

I urge you to include funds and report language for the programs I have mentioned as well as other areas where opportunities exist.

A process as generic as health education is often taken for granted. However, it is essential to the fabric of a healthy America.

Thank you.

Senator WEICKER. Milt, we are deeply, first of all, indebted to you for taking off your valuable time and testifying before the committee, and being very articulate in that testimony.

I might add that the Nation is deeply indebted to Mary Lasker and the Lasker Foundation. We are used to hearing from a lot of people that want money. What Mary and the foundation have given to the United States really is beyond measure. So our thanks to a great lady also.

Mr. GOSSETT. Thank you, sir.

STATEMENT OF DR. BARBARA C. HANSEN, VICE CHANCELLOR FOR GRADUATE STUDIES AND RESEARCH, UNIVERSITY OF MARYLAND

Senator WEICKER. Now Dr. Hansen, I apologize to you, but having just taken the Chair, my list was somewhat at odds with my committee list and I apologize for that fact.

Dr. HANSEN. No problem.

Senator WEICKER. Anyway, we have before us now Dr. Barbara Hansen of the Association of American Universities, National Association of State Universities and Land-Grant Colleges, and it is a pleasure to have you.

Dr. HANSEN. Thank you very much. I am the vice chancellor for graduate studies and research at the University of Maryland, Baltimore, and I also speak to you as one who is in her 15th year of continuous NIH funding and has experienced the great support of your committee in restoring the many potential cutbacks and problems we have encountered in the last few years.

We would like to urge you to continue to hold the line in terms of the creative financing that we keep seeing from the administration. I personally suffered a 14-percent cut last year in my continuation, that is a continuing year of my grant, and can testify to the major impact that that sort of yo-yoing has on ongoing research programs. We certainly hope that you will be as creative as the administration in thwarting these problems.

I would like to also mention the Biomedical Research Support Grant Program. That is a program that since I entered the field of medical research almost 20 years ago has constantly been under threat.

I think part of the problem is it has very little constituency. It does not have a cancer group or a disease group. But it is a very important portion of the research budget of any major university, because it provides those seed moneys for the new investigators.

It provides emergency fill-in money when a grant goes down to 6 months. It provides a critical piece of support and it is never sufficient.

We also think that there is a continuing need for training grants to keep researchers coming into the mill, particularly in cross-disciplinary areas. Many of those universities do not have the funds to start new programs at this point, and programs such as in biomaterials, in molecular biology and toxicology, need startup funds to get universities into these cross-disciplinary areas.

We are also concerned about the research facilities problems. NSF has recently produced a report which does not do justice to the magnitude of the problem that we see in our research facilities funding. We hope that you will look favorably on the opportunity to develop some additional research funding approaches for facilities.

This going around the funding sources and continuous lobbying of Congress is really a symptom of the magnitude of the problem that is out there. We believe that at least 50 percent of our research facilities are inadequate to current biomedical research standards, and would hope you could address that problem in the near future.

PREPARED STATEMENT

I would thank you for your wonderful efforts as a committee to continue to sustain the health research budgets, and would support the report of the ad hoc group on medical research. Their numbers are certainly the numbers we support, and we hope you will be able to support them also.

[The statement follows:]

Statement of Dr. Barbara C. Hansen

Mr. Chairman, Members of the Committee, my name is Barbara C. Hansen. I am Vice Chancellor for Graduate Studies and Research for the University of Maryland. I appear before you today in behalf of the Association of American Universities (AAU) and NASULGC. The vast majorities of physicians, medical research scientists, and members of the health professions in general are produced in the academic health centers located on the campuses of the institutions of our two associations, thus accounting for our profound concern with federal programs that affect academic research and education activities.

For a number of years, witnesses representing our organizations and the institutions they embody, have come before your subcommittee to note their apprehensions and anxieties over the proposals submitted to Congress in the annual budgets of the Administration. Regrettably, this year offers no change. However, before commenting on the Administration's budget, I would take this opportunity to stress the gratitude and admiration of our members for this Committee and your colleagues in the House and Senate who join you annually to produce appropriation levels that are responsive to the needs of the people of this country, rejecting the proposals of the Administration that appear to be constructed solely on the basis of convenient numbers.

We are mindful of the fiscal pressures that you have faced in recent years and face now, and respect ever the more your successful efforts in producing sound funding for federal health programs.

There is irony in the timing of the Administration's budget proposals for NIH and ADAMHA for FY '88. We have been made fully aware of the demand upon all elements comprising the nation to achieve greater competitiveness. A study of commercial biotechnology completed about two years ago by the Office of Technology Assessment (OTA) noted that in the '70s the United States was the world leader in producing biotechnology products for the market and Japan was considerably behind us. Five years later, in the early 1980s, the situation was dramatically reversed.

Although this element of biomedical research is a small one in our total consideration, I highlight it early to emphasize the apparently casual lack of consideration of the implications of their proposals that emanate from the Administration. More significant are the potential effects of the proposals on the conduct of science and the future of this country's role and biomedical science generally. As the newspapers tell us almost daily, we are at a time of unprecedented opportunity, of knowledge breakthroughs that could lead over time to vaccines, cures, and treatments of countless diseases.

We face with deep concern a new disease that is wholly unharnessed and will require major effort in research. To this the Administration responds with budgets that cut deeply into essential programs.

As you are aware, the Administration has proposed a novel series of cuts. They would have the Congress reject its appropriations action of only six months ago and reduce the number of new investigator initiated research grant awards by 700 at NIH and cut each continuing award by a substantial percentage. Similar cuts are proposed for ADAMHA. After a flurry of threatened lawsuits and much correspondence, the Administration withdrew its plan to cut each continuing award, though it did not withdraw its request to cut the total funding for FY '87, leaving that decision to Congress.

We are aware that the leadership of this Subcommittee was among the first in the Congress to notify the Secretary of HEW that it would reject such proposals consistent with the manner in which it determined what funding levels should be. In that light, we do not expect the Congress to change its mind on FY '87, but urge that in every way possible, the Congress make certain that the Administration officials responsible for these proposals understand that they are not acceptable now or ever.

The Administration has a further proposal that would "advance fund" the grant programs for a three-year period, presumably to achieve stability. Ironically, the alleged stability sought by the Administration has been maintained by the actions of the Congress year after year. What the Administration proposes in this advance funding seems only likely to create greater inflexibility without providing any greater assurance that has been the case to scientists regarding the probability of their being funded. We recommend to the Congress that it reject that proposal as well.

In sum, the Administration's proposals would:

- o partially fund research with substantial cuts in continuing grants;
- o eliminate the Biomedical Research Support Grant program with a cut of approximately $60 million;
- o continue insufficient support for research equipment and instrumentation;
- o provide inadequate support for training programs;
- o continue inattention to the crisis of aging and obsolete research facilities.

The cumulative effect of this budget is to reduce research and weaken the capacity of research universities to host the nation's biomedical research. The current system for research support is complex and multifaceted. Today's science is dependent upon expensive technology supported by many mechanisms, public and private. The Administration's budget proposal does not recognize the essential long-term federal investment in research.

The BRSG program is a unique mechanism that has never been supported at its authorized levels. The entire research community supports funding this program because of its importance to research and the support of young research scientists. Frequently, these relatively small grants enable an institution to purchase a small piece of equipment necessary for research to begin or continue. Further, it is frequently the first support for new and highly promising scientists who have to prove themselves over some years before successfully competing for NIH support. The Administration has sought for many years to eliminate the program while Congress has shown its understanding of the significance of the program and restored funds. We ask again that these funds be restored.

Another area that causes consternation in the biomedical research community is the state of research facilities. It is often argued that needs must be given priorities -- that the development of people and providing them funds to do research must come first; that providing them with instrumentation and equipment must come second; and then, if there are additional funds, facilities may be funded. As a set of priorities, this listing may be accurate, but the third priority has been ignored for so long that it is verging on interfering with what is considered most important, the conduct of biomedical research by highly trained scientists.

The quality of facilities may not have to equal the quality of the people in them, but cannot be so obsolete and arcane and devoid of necessary instrumentation that the conduct of first-rate science is precluded. Repairing, renovating, and replacing facilities has been put on the proverbial back burner for so long that it has become an enormous problem.

Our associations have watched individual institutions use more political means than had been the case previously to secure research facilities. This has not eased the problem very much while generating a debate in the Congress and in the community. The leaders of most of institutions that have approached the Congress for individual assistance would testify that were a competitive program available to obtain research facilities, they would immediately drop any efforts to secure them through a process of setasides or earmarkings in different legislation.

We recognize that given the extraordinarily large need and the pressures on the budget, the Congress is not able to resolve this problem immediately. However, we also recognize that even a small program of, say, $200 million to begin with, would relieve the pressure on the institutions and on Members of Congress and provide an opportunity for all to follow orderly procedures in a competition the terms of which would be established by the Congress itself.

Training will always remain a major concern of our educational institutions. We know that the conduct of the Nation's biomedical research has become more complex and requires more technology and is ever more personnel-intensive. Our institutions have trained a cadre of scientists prepared to look for answers to essential questions regarding human health. Certainly, in these times of health demands and even crises, we believe that the nation requires no less than a maintenance of effort in training and preferably an enhancement of programs.

In the Administration's proposals, there lies an unstated belief that the sponsor of research can get away with underfunding the project - that somehow the host institution or the scientist will come up with the funding to carry out the research. We understand that over the years it has been common for the grant support level, after the study sections have adjusted the requests downward, to be reduced by another few percentage points. There is much scurrying about in our universities and medical schools as research scientists need to obtain a few thousand dollars taken from their grants to cover computer costs or a part-time lab assistant. Multiplied many times over in our great universities, which host dozens of projects, this system compels institutions to become major cost sharers in the process of the conduct of federal research. It does, concomitantly, provide the funding agency with some precious additional funds to make a few more grants. With its imperfections, the system has operated well.

Now the Administration, in its budget proposals noted earlier, would have reduced every grant award by ten percent, on average, though with amounts ranging above twenty percent in some cases. The only response to such massive cuts in partially funded awards would have been a reduction in scope of the science done. Other than the confusion and suspicion generated in the medical research community, nothing good would have been accomplished for the people of this country, no money would have been saved, just less science would have resulted.

The members of the scientific community, quite understandably, want to see as many of the country's fine research scholars funded. This requires a larger number of grants. The Administrators in this program are caught in a conundrum should

these additional numbers of grants not be fully funded; the increase in their member instead of being a boon to science becomes an oppressive burden. The answer is not simple, though it is obvious. And it is an answer that the Congress has used in the last many years of its funding for NIH and ADAMHA, and that is additional funds. Clearly, we must be responsible in our requests, noting, Mr. Chairman and Members of the Committee, that whatever your own wishes, you, too, must operate within restrictions. In this context of difficult decisionmaking for you we ask you to recognize three points. First, reductions in grants, either in the direct of indirect cost categories, harm than research. Second, attempts to distinguish between the two categories are specious. The two make up the totality of the research project, and that project can be crippled by severe cuts in either. Third, investigator-initiated research remains the cornerstone of the research effort. Still, it is essential to provide support for the entire spectrum of NIH programs and mechanisms including training, clinical trials, the BRSG program, facilities support as well as the intramural program itself, NIH. All of this applies exactly the same way for ADAMHA.

Again, we thank the Committee for its continual support of research and education and ask you to fund projects fully at whatever funding level you find possible. In that regard, the associations I represent join with many others in support of the fine analysis of the Ad Hoc Group for Medical Research Funding and the consequences for America of increased funding for medical research.

I would be pleased to try to respond to your questions.

Senator WEICKER. Barbara, thank you very much for your testimony, and I think you raise an excellent point—one that is critical, although not as visible—and that is the matter of research facilities and the facilities' money.

Again we have been deferring these matters and there is going to be a price to be paid.

Dr. HANSEN. The deferred maintenance and deferred building program is a real problem.

Senator WEICKER. Well, I will tell you, these problems are so enormous within the medical community, and yet the money to resolve the problems is only a speck within the national budget.

Dr. HANSEN. Amen.

Senator WEICKER. And it is high time we did because otherwise the costs are going to be extravagant beyond all measure in terms of what has to be paid in the future. Thank you very much for your testimony.

Dr. HANSEN. Thank you.

Senator WEICKER. Dr. Norton Greenberger, president of the Association of the Professors of Medicine. Is Dr. Greenberger here?

[No response.]

Senator WEICKER. Dr. Greenberger is not here. OK, Dr. Thomas Pollard of the National Coalition for Science and Technology.

STATEMENT OF DR. THOMAS POLLARD, NATIONAL COALITION FOR SCIENCE AND TECHNOLOGY

Dr. POLLARD. Good morning, Senator. It is my privilege to come here this morning as a representative of over 15,000 working scientists in the areas of cell biology and biophysics. I am a physician scientist, professor, and chairman of the department of cell biology and anatomy at Johns Hopkins Medical School, and the incoming president of the American Society of Cell Biology.

We working scientists deeply appreciate your vigilant attention to the appropriations for the NIH over the years. It is your attention to the NIH that has allowed NIH to promote the excellence in the basic biomedical sciences in which we are all so proud.

Now this is a particularly exciting time in basic science, and I want to make sure you understand that. I am sure you do. But as we get closer to understanding the basic molecular building blocks of life and how they function together in live cells, we begin to appreciate the fundamental principles upon which life is based.

This enables us to look for the first time in a rational way for the factors that cause disease and to search for cures. So we see tremendous opportunities ahead. But amid the successes there are at least two causes for concern that I want to raise.

First is that I am sure that you legislators can agree with us scientists that our Nation's prosperity and its hopes for the future have been built on our preeminent scientific and technological infrastructure.

We scientists are alarmed, as you just agreed with, to see our country losing this advantage, as our facilities and instrumentation for research become obsolete. This trend must be reversed if we are to maintain our world leadership in biomedical fields.

Second, we are concerned that uncertainty about support for research is causing many of our Nation's most talented individuals to decide against careers in science in favor of more lucrative areas. It is disheartening to a scientist when a very meritorious research proposal is not supported due to lack of funds.

And it is disheartening when almost all of our NIH research grants receive across-the-board cuts on a yearly basis. It is also disheartening when original awards are cut in response to the OMB's postappropriation budgetary manipulations and we thank you for your efforts in subverting some of those manipulations this year.

It would be a sad state of affairs if in this air of extraordinary scientific potential that our human potential was lost by discouraging young people from entering the field.

I come here this morning with other scientists, physicians, and concerned citizens to request that the fiscal year 1988 appropriations for the NIH be increased over the fiscal year 1987 levels.

We adhere to the recommendations of the ad hoc group for biomedical research funding in their request for approximately 7,000 new and competing research grants, and an increase of about $13 million over the maintenance of the current program for small instruments, an increase of $238 million for renovation, repair, and replacement of the deteriorating research and animal facilities, and a total fiscal year 1988 appropriation of $7.7 billion.

Finally, Mr. Chairman, we thank you for your continued support and look forward to providing you with any assistance we can in maintaining the excellence of the NIH programs.

PREPARED STATEMENT

Senator WEICKER. Thank you, Dr. Pollard. I appreciate your warm words and I can assure you we will do just that. Thank you.

[The statement follows:]

STATEMENT OF DR. THOMAS POLLARD

Mr. Chairman and Members of the Committee, it is a great privilege to be here today and have the opportunity to address this distinguished Committee.

I come today, in representation of over 15,000 working scientists in the biophysical and cell biology areas; men and women, professors and graduate students, department chairs and faculty members, industrial scientists and R & D managers, who are concerned about maintaining scientific excellence in this country.

I am certain I speak for all of them when I say that we deeply appreciate the vigilant attention to the appropriations for the National Institutes of Health by your Committee. We are certain that the levels of scientific and biomedical excellence that the NIH has promoted over the years have been a direct consequence of this Committee's support and foresight.

Indeed, it is through the NIH's support of investigator-initiated grants that we obtain most of our research funds, and it is through NIH's training programs that we are able to ensure training of the next generation of biomedical scientists.

We are very well aware that the merits of biomedical research are familiar to this Commmittee. My mission here today is not to convince you of this, but rather to ask you to reinforce your commitment to the NIH and to provide for you further reasons for the merits of new appropriations in this area.

As scientists, we are aware that Federal monies appropriated towards basic research are part of the public trust. It is, therefore, our duty to utilize these resources to the best of our abilities and to provide for our country the best biomedical research and training in the world. It is well documented that every Federal dollar spent on basic health related research yields six dollars in return, and that our country has been a leader in biomedical research providing the world with innumerable health-related breakthroughs. These facts provide, in my view, the most powerful argument to support the contention that the scientific community has taken their mission very seriously and responsibly.

This is a particularly exciting time in basic science. Molecular and cellular approaches have allowed us to move forward in many fields of biomedical research. Indeed, for the first time in our history, we are able to produce biomolecules in quantities and varieties that are only limited by our imagination and resources. This capability, in turn, makes it possible to stretch our biophysical techniques to higher limits of resolution. We are now able to monitor minute changes in energy and conformation of proteins and identify the exact site of activity.

We can now modify proteins to mimic genetic defects and determine how such changes affect the behavior of the molecules and their relationship to the cell as a whole. In brief, we can get closer than ever to the basic building blocks of life. We can look for the factors that create disease and search for cures, and in the process we train the next generation of scientists that will take over were we leave off.

Mr. Chairman, these days it is fashionable to talk about "competitiveness" and about the challenge from a rapidly changing world. Although the perspective of researchers and legislators is rarely the same, when it comes to ensuring our ability to meet this challenge, I think we will see eye to eye. The central facts are inescapable: our nation's prosperity has been built on our preeminent scientific and technological infrastructure, our future depends on maintaining that preeminence--and there is no question we are slipping behind--neglecting the roots of our economic strength. To continue to ensure our world leadership position in the biomedical fields we must continue to support our basic research efforts.

Mr. Chairman, your support of increased appropriations for the NIH signals to researchers not only your commitment to basic research, but the trust and confidence this Committee has on the men and women who work so hard to make this research come about. I must confess that the morale of the researchers deteriorates when we see many of the best and the brightest deciding against careers in science to go to more lucrative endeavors.

It is disheartening to learn, for example, that a very meritorious research proposal will not be supported due to lack of funds, or that the original award has been cut in response to OMB's post-appropriations budgetary manipulations. Indeed, Mr. Chairman, it would be a sad state of affairs if, in an era of extraordinary scientific potential, our human potential would be lost.

We have come here this morning, united with other scientists, physicians and concerned citizens to request that the FY88 appropriations be increased over the FY87 levels. Specifically, we adhere to the request of the Ad Hoc Group for Medical Research Funding and request the following:

- That the FY88 appropriations for NIH allow to fully fund approximately 7000 new and competing renewal research grants, in order to maintain a healthy and responsible growth of investigator initiated grants. This request will require approximately $21 million over maintenance of current program balance, to a total cost of approximately $3.9 to $4.1 billion.

- An increase of $13 million over the maintenance of current program balance for the small instrumentation grant program.

- In order to maintain appropriate levels of renovations, repair and replacement for deteriorating research and animal facilities, we request an additional $238 million over maintenance of current program balance.

- The total request for FY88 NIH appropriations, including facilities is $7.69 billion.

Mr. Chairman, we realize this request is a large increase over the FY87 appropriations level of $6.181 billion. However, our request is not merely a shopping list of programs or projects, it is a well thought out plan for expenditures that would allow our research efforts to go forward, which would enhance the numbers of new students and which would permit research institutions to comply with the new and important guidelines on animal research recently instituted by Congress.

Again, Mr. Chairman and Members of the Committee, we thank you for your support and hope that in this era of economic austerity, this Committee will fight for attaining the appropriation levels we are requesting for the NIH. We realize it is a very tough assigment and we will be very glad to provide any support you may need towards this goal.

Thank you very much.

CURRICULUM VITAE

Thomas Dean Pollard

Born July 7, 1942 Pasadena, California.

Education:

1964	B.A., cum laude. Pomona College.
1968	M.A., cum laude. Harvard Medical School.

Honors:

1968	Alpha Omega Alpha Honor Society, Harvard Medical School.
1974-78	USPHS Research Career Development Award.

1984	Guggenheim Fellowship.
1984	Winston Churchill Overseas Fellow, Churchill College, Cambridge, England.

Academic Career:

1968-69	Medical internship, Massachusetts General Hospital, Boston.
1969-72	Staff Associate, Laboratory of Biochemistry, Section on Biochemistry and Ultrastructure, National Heart and Lung Institute, Bethesda, Maryland.
1972-75	Assistant Professor of Anatomy, Harvard Medical School.
1975-78	Associate Professor of Anatomy, Harvard Medical School.
1977-present	Professor and Director, Department of Cell Biology and Anatomy The Johns Hopkins University School of Medicine.

Professional Activities:

1976-79	Council, American Society for Cell Biology.
1977-80	NIGMS Cellular and Molecular Basis of Disease Review Committee
1977-80	Council, Biophysical Society.
1977-82	Editorial Board, Journal of Cell Biology.
1982-	Associate Editor, Annual Review of Biophysics.
1984-	Associate Editor, Journal of Cell Biology.
1984-	Louise Markey Charitable Trust, Selection Committee for Markey Fellows.
1984-	Member, Molecular Cytology Study Section, NIH, Chairman,1986-
1985-86	National Research Council, Panel on Cell Biology.
1986	National Research Council, Commission on Life Sciences Committee on Research Opportunities in Biology.
1987-88	President, American Society for Cell Biology.
1987-	Council, Biophysical Society.

STATEMENT OF DR. CYNTHIA H. NULL, EXECUTIVE DIRECTOR, FEDERATION OF BEHAVIORAL, PSYCHOLOGICAL, AND COGNITIVE SCIENCES

Senator WEICKER. Dr. Cynthia Null of the Federation of Behavioral, Psychological, and Cognitive Sciences.

Dr. NULL. Thank you. Mr. Chairman, I am Dr. Cynthia H. Null, executive director of the Federation of Behavioral, Psychological, and Cognitive Sciences, a coalition of 12 scientific societies. Thank you for the opportunity to comment on the fiscal year 1988 appropriations for the National Institutes of Health.

It is important to the people of this Nation to maintain a strong Federal role in basic research, even as the Congress is taking major steps to reduce the Federal deficit. Research results cannot be bought on a short-time scale. Neglecting basic research this year means fewer gains in subsequent years that cannot easily be made up.

As you well know, behavior is a key factor to the successful health promotion and in disease prevention. Basic behavioral science research is critical to improving the health of our Nation's people. The administration's fiscal year 1988 budget request for NIH is $649 million below the fiscal year 1987 appropriation level.

Although we are sympathetic with deficit reduction efforts, we believe that the health of the people of this Nation is too important to have research at NIH cut. We are, of course, convinced that the approximate 3 percent of NIH funds that go to support of behavioral and social sciences should be increased.

The importance of behavior in health is established and it is critical that the NIH place a stronger emphasis on behavioral research. Behavior has been linked to many health problems including cancer, heart disease, and AIDS.

Health impairing behaviors, such as smoking, poor nutrition, heavy drinking, lack of exercise, failure to comply with treatment and a delay in seeking medical care, are all linked to serious disease. Stress has also been linked to physical illness as well.

In recent years there has been a growing awareness that patients' failure to adhere to prescribed medical regimens is probably the greatest single problem in bringing effective medical care to individual patients.

An important priority for research is the integration of behavioral and biomedical knowledge to enhance our understanding of the underlying interrelationships between behavior and physiological processes. The field of behavioral immunology is just one example of some of the recent exciting developments in this link between behavior and physiological illness.

In conclusion, we urge for fiscal year 1988 rejection of the President's research funding reductions at NIH, an increase in support over the fiscal year 1987 levels, additional funds for training for NIH, and continued support for research in health and behavior.

Good research requires attracting good people to work on important problems, training new researchers, obtaining basic results, and working out their applications. None of this can be done quickly. The investment and ideas, people and methods, and applications must be done now.

Thank you for this opportunity to share our views with you. Please do not hesitate to call on our staff if we can be of further assistance during your deliberations. Thank you.

PREPARED STATEMENT

Senator WEICKER. Dr. Null, thank you very much for your testimony. We appreciate it.

[The statement follows:]

STATEMENT OF DR. CYNTHIA H. NULL

Mr. Chairman and members of the Subcommittee, I am Dr. Cynthia H. Null, Executive Director of the Federation of Behavioral, Psychological and Cognitive Sciences. I am testifying today on behalf of the Federation, a coalition of 12 scientific societies with combined memberships of over 90,000. The Federation's interests include research on behavioral, psychological and cognitive processes and their physiological bases and its application to education, health and human development. Thank you for the opportunity to comment on the FY88 appropriations for the National Institutes of Health (NIH); the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA); and the Office of Educational Research and Improvement (OERI) in the Department of Education.

It is important to the nation to maintain a strong Federal role in basic research even as the Congress is making major steps to reduce the Federal deficit. Research results cannot be bought on a short time scale. Neglecting basic research this year means fewer gains in subsequent years. We will not be able to remedy this deficit by increasing research spending at that later time. Good research requires attracting good people to work on important problems, training new researchers, obtaining basic results and working out their applications. None of this can be done quickly; the investment in ideas, people, methods and applications must be made now. That is why it is important for the government to maintain and enhance, wherever possible, its support for basic research.

NATIONAL INSTITUTES OF HEALTH

The Administration's FY88 budget request for NIH is $649 million below the FY87 appropriation level. Although we are sympathetic with deficit reduction efforts, we believe the health of the people of this nation is too important to have research at NIH cut so drastically. We are, of course, convinced that the approximately 3% of NIH funds which go to support behavioral and social science research should not be cut; in fact, they should be increased. The importance of behavior in health is established, and it is critical that NIH place a stronger emphasis on behavioral research.

We strongly support 6,500 new and competing awards at NIH. We are disappointed with the Administration's attempt to reduce the number of new and competing awards to 5,700. Such a reduction will seriously disrupt our nation's long-term research capacity and dim our hopes of reaching national goals of a healthier American population.

I will comment briefly on behavioral science research at the National Institute on Aging (NIA) and the National Institute of Child Health and Human Development (NICHD), although important behavioral science research is and must continue to be funded in other Institutes as well. I will also discuss NIH's health and behavior initiative.

In the 1970s alone, we had a 40% increase in the over-75 population. This group, currently 11.5% of the population, is projected to be at least 20% by the year 2020. I just don't think this country can afford to invalidate 20% of its population. We're simply not that rich. It is important to note, therefore, research such as that on job performance which shows experience is a better predictor of success than youth or speed.

Given the blessing of longer lives, the important question is how healthy, active and independent our lives will be. For the elderly, nothing is more terrifying and life altering than Alzheimer's disease. Alzheimer's disease and related dementias will affect 8.5 million people by the middle of the next century. Behavioral scientists are an important part of NIA's extensive research on Alzheimer's disease. Some areas of their research include measurement of cognitive decline in Alzheimer's patients, development of early detection techniques, and psychophysiological research into causes and treatment.

Another important part of our population is our children--our future. Insuring they are born healthy and have the opportunity to achieve their full potential is the mission of NICHD. Research sponsored by NICHD has improved our understanding of both normal and abnormal development.

Behavior has been linked to many health problems, including cancer and heart disease. Health-impairing behaviors such as smoking, poor nutrition, heavy drinking, lack of exercise, failure to comply with treatment and delay in seeking medical care are all linked to serious disease. Stress has been linked to physical illness as well. In recent years there has been a growing awareness that patients' failure to adhere to prescribed medical regimens is probably the single greatest problem in bringing effective medical care to individual patients.

Increasing evidence shows that prevention and behavioral medicine could significantly reduce morbidity and mortality from most leading causes of death. An important priority for research is the integration of behavioral and biomedical knowledge in a way that elucidate the mechanisms underlying the interrelationships between behavior and physiological processes.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION

The present is marked by both expanding scientific opportunities and decreasing research support. The Administration has proposed decreasing ADAMHA research support, reducing new and competing awards from 648 for FY87 to about 473 in FY88. This reduction jeopardizes the health of research on mental health and drug and alcohol abuse, which is not in our country's best interest. The Institute of Medicine estimates that the overall monetary impact of mental disorders and substance abuse in the United States is $185 billion per year.

The small grant mechanism at NIMH has been an important program for new researchers and those redirecting their careers toward mental health issues. In 1987, NIMH plans to make 81 such awards with about $2 million. Both NIAAA and NIDA have had very small (about 10 awards each per year) small grants programs as well. The Administration's budget unwisely eliminates this program at NIMH and calls for 1 small grant at NIDA and 9 at NIAAA. The small grant mechanism involves very few dollars but can be critical to new researchers. Its near elimination will have dramatic negative consequences for future research progress. These programs need to be generously supported, not eliminated.

In spite of the Institute of Medicine's recommendation in the most recent edition of *Personnel Needs and Training for Biomedical and Behavioral Research* to increase Federal support for research training, this support at ADAMHA has declined dramatically--from 1,352 trainees in FY80 to about 1,116 in FY87. The Administration's budget proposes 1,121 trainees in FY88.

Research efforts within the ADAMHA are and should continue to be directed beyond the understanding and treatment of specific mental disorders and addictions. We must understand the normal to understand the abnormal.

Behavioral sciences are a central part of mental health research. There is a growing need to understand the etiology of mental illness through shared behavioral and biological information. The range of research includes attentional mechanisms and defects, correlates of personality competence, self-regulatory mechanisms, family processes, stress, and prosocial and aggressive behaviors.

OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

The Administration's request of $70.2 million for OERI in FY88 is the minimal amount commensurate with the need for research in education and with the ability of the educational research community. Fiscal resources for the Department of Education increased from approximately $6.1 billion in 1973 to $17.1 billion in 1984, an increase of 22% in constant dollars. During the same period NIE resources fell 76%. As the funds decreased, the proportion of NIE support going to Congressionally mandated research centers and regional laboratories increased to a point where NIE could not sponsor field-initiated studies.

We are extremely pleased that OERI was able to conduct, at long last, a small field-initiated research program in FY86 and is proposing a larger effort in the FY88 budget. The OERI needs resources to respond to investigator-initiated research proposals--to support the independent researcher with a novel idea or the innovative collaboration of a group of researchers from different disciplines. While excellent work is done at some of the research centers and regional laboratories, uncommitted resources must be available to respond to fresh new ideas from unforeseen sources, to support and encourage interdisciplinary research (e.g., between cognitive psychologists, educators and subject-matter experts), and to increase the limits the pool of research talent the OERI can tap.

It is crucial to our nation's future that we provide excellent education for our young people, but providing this excellence is proving increasingly difficult with traditional instruction. New information about the sources of difficulty in understanding mathematical, scientific and technical concepts provides a basis for development of educational materials and methods for reaching a broader group of students. In addition, research to identify factors contributing to the relatively low levels of participation in mathematics and science courses by women and members of minority groups is underway and is suggesting ways to encourage increased participation.

By applying research, we could provide effective materials for teachers to help students learn reliably and efficiently. We believe basic educational research can help our nation provide improved education, even though it may continue to be difficult to attract and retain enough good teachers. We will not revolutionize the school curricula tomorrow. Continued research is needed to understand mechanisms of learning and reasoning in more subject areas and to learn how to apply our understanding to produce better practical instruction.

CONCLUSIONS

We know you face difficult budget decisions in the days ahead, but we caution you not to deplete the mine of knowledge needed to keep this nation strong. We share with you a strong concern for consistency of funding for research by the Federal government. It is important to the training of future generations of scientists, the treatment and prevention of illness, the birth of healthy and wanted babies, increased functioning of the elderly, the improvement of the mental health of the people of this nation, and the education of our children. We are grateful for the continued support of this Subcommittee. We urge for FY88:

- rejection of the President's research funding reductions at NIH and ADAMHA,
- sufficient funds to support at least 6,500 new and competing awards at NIH,
- sufficient funds to support at least 700 new and competing awards at ADAMHA,
- additional funding for research training for NIH and ADAMHA,

- continued support for health and behavior research,
- restoration of the small grants program at NIMH, and
- funding OERI, at the very least, at the level of the Administration's FY88 budget.

The Federation thanks the Subcommittee for the opportunity to share our views with you. Please do not hesitate to call on our staff if we can be of further assistance during your deliberations.

STATEMENT OF DR. TERRENCE R. DOLAN, CHAIRPERSON, AMERICAN ASSOCIATION OF UNIVERSITY AFFILIATED PROGRAMS

Senator WEICKER. Terrence Dolan of the American Association of University Affiliated Programs.

Dr. DOLAN. My name is Terrence Dolan. I am a professor of neurophysiology and director of the Waisman Center on Mental Retardation and Human Development at the University of Wisconsin.

Today I am representing the Association of Mental Retardation Research Centers as chairperson of that organization, and the American Association of University Affiliated Programs, as a member of their executive board.

On their behalf, first of all I wish to thank you for your efforts and the committee's efforts in the past on behalf of the NIH budget. We have provided you earlier with a brief written statement containing information pertinent to our testimony today. Because of time limitations I will not try to summarize completely that information.

However, I hope you will read the materials, and in particular we wish to make two major points today. The first is that, as documented in a new book, "Federal Policy Toward Mental Retardation and Developmental Disabilities," by David Braddock, Federal support for research and training in developmental disabilities has deteriorated to its lowest point since the mid-1960's. The graph that I have given you is a copy of a graph from that book.

Second, this deterioration has come at a time when it has been documented that a modest investment in research has significant fiscal benefits to the society. In the next 2 minutes I will elaborate on each of these two items.

With respect to the first point, we have submitted a copy of the graph from that book that summarizes the proportion of Federal support that supports research and training in development disabilities over the past 30 years. As you will note that figure is at its lowest level since 1964.

The information on the graph points out that our society has reallocated its resources to the provision of caretaker services at the expense of research and training on prevention and new treatment strategies.

With respect to the second point it is very important for you to be aware of the fiscal impact of prevention research. As an example, research at the mental retardation research centers has developed interventions which prevent the mental retardation that results from congenital hypothyroidism, and from phenylketonuria or PKU.

A recent study shows for PKU alone the average savings are at least $208,000 per individual over his or her lifetime, and far greater for the estimated 64 percent of these individuals who would have required eventual institutional care.

Based on this and other information provided to you in the written materials, we have asked for your support in three areas. First, increased support for the NICHD, the Institute at the NIH given primary responsibility for research and training in developmental disabilities. At this moment the NICHD is the Institute at the NIH least able to fund research, approved research grants.

Second, increased support for mental retardation research centers. This year for the first time in 20 years the original legislation that created those centers allows for growth in the number of centers.

And finally, support to conduct four national studies that involves the collaborations of the Nation's mental retardation research centers and the university affiliated facilities. These studies would have great impact on the epidemiology and treatment of Down syndrome, Fragile-X syndrome, self-injurious behavior, and infants who are at high risk for developmental disabilities because of very low birth weight.

In conclusion we have endeavored to provide you with information that documents the scientific significance and the fiscal benefits of research and training in mental retardation and developmental disabilities, and we thank you for this opportunity.

PREPARED STATEMENT

Senator WEICKER. Thank you very much for your testimony. I appreciate it.

[The statement follows:]

STATEMENT OF DR. TERRENCE R. DOLAN

My name is Terrence Dolan. I direct the Mental Retardation Research Center at the University of Wisconsin, and chair the Association of Mental Retardation Research Centers. On behalf of the more than 500 scientists throughout the country who are conducting research in these 12 Mental Retardation Research Centers (MRRCs), I thank you for the opportunity to address you today. We wish to convince you that more support for research on mental retardation and other developmental disabilities will result in significant human benefits and substantial savings to society. Specifically, we wish to address three issues. They are:

1. the significant deterioration of federal support for research and training on mental retardation and developmental disabilities;

2. the timeliness and opportunity, over the next two years, to strengthen and expand the Mental Retardation Research Centers program; and

3. the opportunity of a select set of national collaborative studies that capitalize on recent advances in research to identify new strategies to prevent and to treat developmental disabilities.

First, let me remind you that the term "developmental disability" includes many chronic disabling conditions caused before or after birth and manifest in the first 21 years of life, including Cerebral Palsy, Down Syndrome, autism, epilepsy, and severe learning disabilities. In the United States today, there are 6,600,000 mentally retarded persons. In addition, another 6,000,000 developmentally disabled persons have chronic disabling conditions that require special societal resources to meet their needs. This year alone, about $5 billion will be spent to care for the most severely disabled of these individuals who require institutional care.

The 12 Mental Retardation Research Centers, funded by the National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health (NIH), were created by the Congress in 1963 to conduct research aimed at preventing and treating developmental disabilities. The scientists in the MRRCs have made many important discoveries. As an example, interventions which prevent the mental retardation that results from congenital hypothyroidism and phenylketonuria (PKU) have been developed. In addition to the obvious benefits that accrue to the person with the disability and his/her family as a result of these successful interventions, there are tremendous fiscal benefits to the society. A recent study has shown that, for PKU alone, the average savings are $208,000 per individual over his/her anticipated lifetime. For the estimated 64% of individuals with PKU who would have required eventual institutional care because of the severity of the disease, the savings are even more startling, averaging over $35,000 per year. In other words, newly developed interventions provided by research have a truly dramatic fiscal impact on our society.

Tragically, we still do not understand the causes of a majority of the developmental disabilities that occur. We are on the threshold of significant new knowledge about the complex biological and environmental factors that combine to place children at high risk, but that progress is being severly compromised by a significant deterioration in federal support for research and training. Dr. David Braddock of the University of Illinois has analyzed the decline in federal support for research and training in developmental disabilities. The results of his analysis, partly summarized in the figure we have provided, show that that support has deteriorated to its lowest level since the mid-1960s. In the figure, note the dramatic trend that is illustrated -- our society is reallocating its resources to the provision of services at the expense of research and training activities. We are mortgaging future prevention to pay for current caretaker services. As a result, in the future we can expect the same numbers of disabled persons to require care; the same significant costs will have to be spent on treatment and special programs; and the same inability to provide competently trained health care professionals and researchers will be continued.

The deterioration of suppport for research and training in the area of developmental disabilities is reflected in the inability of the NICHD to support research. The NICHD is the institute at the NIH given primary responsibility to support research on mental retardation and developmental disabilities. And yet, the NICHD may be less capable of supporting research than any other institute at the NIH. Last year, 36% of the approved grants at the NIH received support, and at some Institutes the award rate was considerably higher. But, at the NICHD, only 26% of approved grants received support.

In addition, because of the lack of sufficient funds at the NICHD, the Institute was forced to reduce the support of the Mental Retardation Research Centers by 9.5% this past year. The President's budget for the NICHD for FY 88 will make the situation worse. We are told by NICHD administrators that the requested increase for the NICHD in FY 88 is $2,106,000, a .6% increase. This less-than-1% increase will require the Institute to reduce funding for the MRRCs by 16.4% from recommended levels next fiscal year.

Now is not the time for such cutbacks, either from a scientific or a fiscal perspective. Several opportunities are available now that can contribute significantly to the prevention and treatment of developmental disabilities as well as providing tremendous fiscal savings. One corrective action would be to increase the number of federally funded research centers dedicated to developmental disabilities. The existing network of centers was created in the early 1960s by legislation that limited their original number to 12. As a result, for 20 years, the network has been a closed set -- no new centers have been funded, and only those centers that were originally supported have been eligible to compete for the funds appropriated by the Congress.

As noted earlier, these Centers have been very successful in making scientific discoveries that would have been difficult or impossible without the NICHD support for interdisciplinary centers. This year, for the first time in 20 years, other universities have the opportunity to compete for and initiate new research centers to study mental retardation and developmental disabilities. This is a unique opportunity. There are many great universities in this country with the capability to contribute to the study of developmental disabilities. New successes and new interventions would be anticipated by their participation.

Another corrective action we recommend to you concerns an opportunity to address several specific developmental disorders, on a national scale, and to make significant progress in their prevention. Scientists from the mental retardation research centers, in association with representatives from the nation's University Affiliated Programs, have met on several occasions during the last year to discuss and plan national efforts aimed at identifying and eliminating some of our most insidious developmental disorders. That group, after much discussion and planning, has identified four priority areas in need of a coordinated national effort. These areas are: Down Syndrome, self-injurious behaviors, Fragile-X Syndrome, and infants with a high incidence of developmental disabilities because of very low birthweight. For each disorder, a research plan involving a nationally coordinated effort among the Mental Retardation Research Centers and University Affiliated Programs has been detailed. The outcome is vitally needed to gain information about the causes of these disorders and how best to treat afflicted individuals.

In closing, let me summarize what we have recommended and suggest that the cost of our recommendations is very modest.

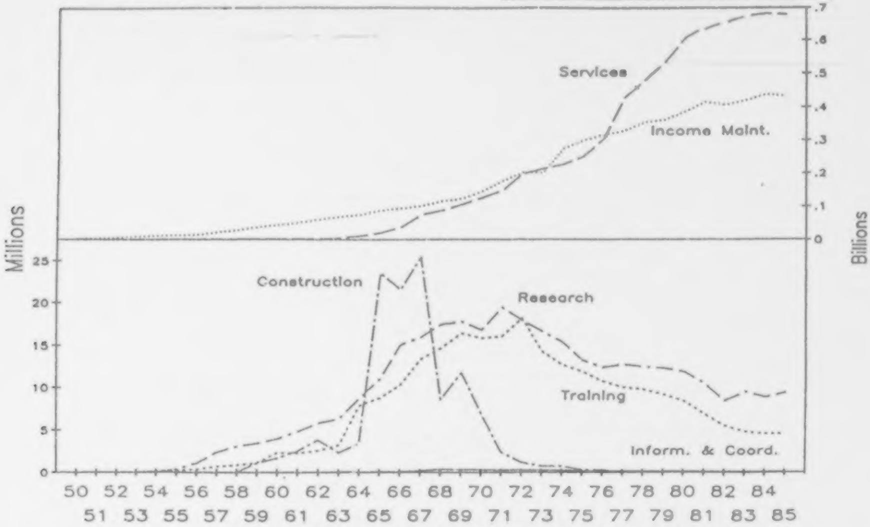
Support for research and training in developmental disabilities has deteriorated to a level that is scientifically unproductive and fiscally unsound. In order to bring the NICHD award rate of competitive grants up to the NIH average in FY 88, an addition of $62 million to the competing research award line is needed. While $62 million is not a small amount of funding, it still is an increase of only 19% of the NICHD budget, and less than 1% of the NIH total budget. The President's budget request for FY 88 will allow the NICHD to fund only 24% of new, approved research grants.

Also, today for the first time in 20 years, we can extend support to new mental retardation centers while continuing to fund the productive centers already in existence. By adding $3,000,000 specified for MRRCs to the NICHD Research Centers line this year, and again next year, four new centers could be initiated. The annual cost of a MRRC center grant is less than the average savings provided by early identification and treatment of four newborns with PKU.

Finally, the special national collaborative efforts we recommend to you require only about $2,000,000, and yet would constitute a major national initiative to understand, treat, and eventually prevent conditions that affect tens of thousands of Americans. These efforts could never be achieved by individual investigators working in isolation.

We have endeavored to keep our requests to a minimal level, and to be controlled in our disappointment about the steady erosion in funding for research on developmental disabilities. Today, we urge you to correct this situation, so that our country may provide the very best opportunity for citizens to lead healthy, productive lives, with an absolute minimum risk for future, yet-to-be born generations. Research can lead to prevention of unnecessary birth defects and postnatal damage, and can open up treatment avenues that result in tremendous fiscal savings and a better quality of life for all. Thank you.

Federal MR/DD Spending By Category of Activity: FY 1950–85, *In 1950 Dollars*



Services & Income Maintenance are plotted against right axis.

Source: Braddock, Howes, & Hemp, Expenditure Analysis Project, ISDD, U of IL at Chgo, 1984

STATEMENT OF GRACE POWERS MONACO, NATIONAL LIAISON CHAIRMAN, METROPOLITAN WASHINGTON AREA CANDLELIGHTERS

Senator WEICKER. The committee next moves on to the NIH National Cancer Institute. The first witness to testify is Grace Powers Monaco of the Metropolitan Washington Area Candlelighters.

Ms. MONACO. Mr. Chairman, it is a pleasure to be here for the 17th year of testifying for Candlelighters, particularly since——

Senator WEICKER. That must mean you started testifying when you were 1 year old. [Laughter.]

Ms. MONACO. Oh, do I not wish. But particularly since one of the founding groups in Candlelighters of 3 in 1970 was in the State of Connecticut, which now has 7 groups, of the 250 groups that are represented in the Candlelighters Child of Cancer Foundation network.

We support the ad hoc research budget. I know that the National Coalition on Cancer Survivorship, of which we are a part, also supports that budget. And the National Coalition on Cancer Research also supports that budget.

I know that the representatives of the latter two organizations cannot be with you, but they are completely in accord on the ad hoc budget that has already been mentioned by other people who are testifying.

I am not going to go into the particulars of the scientific reasons why I feel full funding is necessary, because I know that that will be covered by the three speakers that are following me.

What I do want to do is refer just briefly to a very interesting statistic that has recently come to light. In fact it was told to me last Friday night by a gentleman running a bone marrow transplant center in the State of Texas, who said, Grace Ann, I had somebody running some statistical data for me the other day, and he said, you know what I found out?

Since we are now curing 65 percent of our children with cancer, every year we are returning the number of children to the general population who are going to be survivors, whose contributions in earnings to the gross national product of this country will exceed the amount we are now putting forth to fund the programs of the National Cancer Institute.

For this reason I wanted to tell you that what you and this committee have done already in terms of bringing the survivorship from pediatric cancer up from 10 percent in the fifties to 30 percent by the late sixties, up to 54 percent by the late seventies, and now to 65 percent, is turning back the kinds of dividends in terms of contributions to the gross national product that more than justifies the full funding and the continued optimism for what the national program can achieve.

There has been a lot of talk over the last month about the report by a certain nameless Government agency, which says, forget all of this business about the war on cancer, because it has failed. That program, that report, has been written by people who are immensely shortsighted.

I think that the progress in childhood cancer has shown that, and for people to tell you there is no comparison shows how little they know about the way cancer is conquered. The people in biology that have testified before are proof of that.

Why were they so successful in pediatric cancer? It came because they were able to parse down the subsets of pediatric cancer into areas which permitted them to tailor research. It was because they then took the steps to aggressively pursue treatment in order to eradicate the cancer cells that were there.

Now through pediatric cancer research, we have the sequencing of genes related to cancer, we have the identification of missing chromosomes. Just as childhood cancer was the precursor of combined chemotherapy, which is now curing so many of our adult cancer patients, we can see the same inroads that were made in pediatric cancer research being translated to the adult communities, if we give them a chance.

And one of the biggest chances they need is full funding of the community cancer programs that NCI has. So that the doctors out there in the field will understand the need for aggressive application of the same therapeutic principles that have cured pediatric cancer. It takes time to do that, and I know from your perspective you will give us the time and you will give us the funding.

PREPARED STATEMENT

We want to thank you for your support in the past, and certainly know that you will continue the support in the future. Thank you very much.

Senator WEICKER. Thank you very much, Grace. We appreciate your testimony.

[The statement follows:]

STATEMENT OF GRACE POWERS MONACO

My name is Grace Powers Monaco. I am the National Liaison Chairman of the Metropolitan Washington Area Candlelighters. This association serves as the legislative arm of an international volumteer coalition of 250 groups of parents whose children have or have had cancer in 50 states and Puerto Rico, Australia, Brazil, Canada, Chile, Denmark, England, Finland, France, Germany, Greece, Guatemala, Holland, India, Indonesia, Ireland, Israel, Italy, Mexico, New Zealand, Sweden, South Africa, Spain and East Africa.

The GAO report on progress in cancer survival should not influence your decision on approporiations. The National Cancer Institute merits full funding and more in continuing its successful step-by-step approach to understanding the mechanisms that create and ultimately defeat cancer.

If you review the report, you will note that if fails to mention the tremendous strides made by NCI in the cure of childhood cancer and the positive impacts of that research on the treatment of adult cancers.

A study by Dr. Robert W. Miller and Frank W. McKay published in the Journal of the American Medical Association 1) tracked deaths from cancer among children under age 15 from 1950 to 1979. It showed in that period:

80% fewer deaths from Hodgkin's disease, a type of blood cell cancer;
68% fewer deaths from kidney cancer;
50% fewer deaths from leukemia and bone cancer;
32% fewer deaths from other immune system cancers; and
31% fewer deaths from all other cancers.

The 1970 survival rate overall from childhood cancers was 39%. Now over 54% are surviving their disease 2). Data from 1980 showed the mortality rates for leukemia and non-Hodgkin's lymphoma are still declining. But rates for Hodgkin's disease, bone sarcomas, kidney and other cancers seem to have reached a plateau.

The physicians treating childhood cancers in the middle '60s only saw cure in 10%, today 65% of our children can expect cure. This is not an accident, it comes from a careful collegial research plan and cooperative trials. Even in early phase studies, 30% of our children considered probably beyond cure rally for cure or long-term survival.

1* JAMA 251:12 156-7-70, March 1985
2**American Cancer Society Statistics 1984

This is where we want and can eventually be in adult cancer, if we don't emasculate support programs funded by the National Cancer Institute.

GAO and the previous Bailor reports push aside childhood cancer as "rare." However, it is the development of combined chemotherapy modalities in children that pioneered later dramatic results in use with adults. The same is holding true in treatment with bone marrow transplantation and in the unmasking of treatments to correct the missteps in our genes and chromosomes that may eventually eliminate mortality from many cancers.

We learned through research on children how aggressive we needed to be to cure cancer, we learned what the human organism can take. Once these blueprints for successful treatment are adopted at the local treatment levels in adult cancers, we should see a sharp improvement in adult survival. National Cancer Institute, through its Protocol Data Query and Clinical Cooperative Oncology Programs, has in place the outreach component that can make this happen.

Where do the children next point the way? Only a few months ago the gene for one childhood cancer - retinoblastoma - was isolated. This is the first human cancer gene isolated. It has since been sequenced and the reasons why it fails to function in some persons pinpointed.

It is expected that this work will lead to an understanding of cancer in general, in part because this recessive cancer causing gene is thought to be involved in common cancers.

The tools of molecular biology, specifically the analysis of cell surface proteins and genetic changes (such as activation of oncogenes) have led to improved understanding of childhood and adult malignancies, and to improved therapy. For many years it has been appreciated that infants (less than one year of age) with acute lymphoblastic leukemia (a group with a significantly worse outcome) have extensive and bulky disease more often than do older children with the same disease. It is now apparent that this leukemia in infants is caused by a primitive cell type that differs from the leukemia found in older children. This important observation was made possible through the use of diagnostic monoclonal antibodies which identified primitive markers on the leukemia cells of infants. These clinical and biological differences predict and partially explain the observed poor response to treatment of infants with Acute lymphocytic leukemia and will lead to new treatment approaches for these leukemia victims.

The Children's Cancer Study Group studied 89 patients with untreated primary neuroblastoma (a disease which represents 10% of all childhood cancers) to determine the relationship between the number of copies of the N-myc oncogene found in the tumor and survival following treatment. Analysis revealed that an increase in the number of N-myc copies was associated with the worst prognosis: the estimated progression-free survival at 18 months was 70% for patients whose tumors had a single N-myc gene, 30% for those with 3-10 copies, and 5% for patients whose tumors had more than 10 N-myc copies. These results suggest that amplificaiton of N-myc may play a key role in determining the aggressive behavior of neuroblastomas and that inhibiting oncogene expression or inactivating oncogene products might lead to improved patient survival.

Molecular biology focusing on the similarities among cancers in improving treatment responses has also been pioneered in children. For example, applying these diagnostic techniques to peripheral neuroepithelioma in children, increased response rates from under 30% to 95% of treated patients have complete resolution of their tumor and nearly 70% are disease-free with a median followup of 16 months. The ability to apply molecular biologic techniques, therefore, has improved the diagnosis and the classification of tumor types and improved the ability to select the optimum therapy.

Other examples of continued evaluation and improvement in childhood cancer treatment occured in pediatric solid tumors. The Intergroup Rhabdomysarcoma Study Group recently reported a 73% three year relapse-free survival for patients who have localized residual disease after surgery. In a previous study, 59% were relapse-free at three years. The Pediatric Oncology Group is planning to evaluate, in a prospective radomized study, whether autologous bone marrow transplantation done in first remission for children with disseminated neuroblastoma offers superior disease-free survival over that attained in a similar group of patients treated with chemotherapy only.

We have paid for the blueprints for cure in childhood cancer; those blueprints have been translated into a mockup prototype building model. Don't refuse now to construct the building: treatment approaches that, together with prevention, may substantially reduce mortality by the year 2000.

What We Ask For:
(dollars in thousands)

Program	1988 Request	Suggested Increase	Full Amount
Intramural Research	$245,815	$24,581	$270,396
Cooperative Clinical Research	$ 78,735	$ 7,873	$ 86,608
Research Grants	$463,800	$46,380	$510,180
Cancer Biology	$312,124	$31,212	$343,336

Funding for the intramural programs is particularly important. Not only do these programs and their translation into improved care at the Clinical Center provide a reference point for state-of-the-art cancer management, they also serve as a referral and second opinion resource that helps families throughout the United States find their way into the best care available to them.

The Clinical Center means trust, dependability, accountability to the thousands upon thousands of families whose lives have been touched by this special assistance.

Mr. Chairman, Members of the Committee, on behalf of all parents of children with cancer across the country, I should like again to commend the Chairman and the Members of the Committee for their many efforts and their understanding of our problems. Your dedication to the cause, cure and the prevention of cancer encourages us to face the future with a greater degree of hope and peace of mind. Those of us who have lost children are grateful that your efforts for adequate funding of cancer research will be a memorial to them. And, those of us whose children are under treatment are grateful for the hope research gives us in maintaining their well-being.

We gratefully acknowledge the past role that the Committee has played in support of the efforts to conquer this dread disease. We, and all those parents yet to face the tragedy of childhood cancer, hope for your continued efforts for all our children.

Thank you for permitting us to appear before you.

STATEMENT OF DR. ALBERT H. OWENS, JR., CHAIRMAN, PUBLIC ISSUES COMMITTEE, AMERICAN SOCIETY OF CLINICAL ONCOLOGY, AND PRESIDENT, JOHNS HOPKINS HOSPITAL, BALTIMORE, MD

Senator WEICKER. Dr. Albert Owens of the American Society of Clinical Oncology.

Dr. OWENS. Thank you very much, Senator, for the privilege of appearing. For 10 years I have served as the director of the Oncology Center at Johns Hopkins and now I serve that hospital as its president.

You know the American Society of Clinical Oncology, I think, which is the largest organization of specialists in this country that are involved in cancer research and treatment.

I think one of our main purposes in appearing before you today is to thank you and your colleagues very much for the continued, very strong support that you have provided to the NIH budget and to the NCI budget in particular. These are very exciting times in science, and there is a great deal of promise for helping with human disease and its treatment.

We are here also to recommend that you support the NCI budget, the bypass budget that has been recommended by the National Advisory Cancer Council at a level of $1.7 billion. We strongly urge you to support the NIH budget at a level of approximately $7.7 billion, as recommended by the ad hoc group for medical research.

There are some special concerns that I think we would like to bring to your attention. One relates to the very special opportunities that are developing for the direct study and development of newer treatments for the human diseases we call cancer. I hope that your committee will look into the support of this type of activity so that it can be organized and supported properly.

The second thing I would bring to your attention is the matter of funding of cancer centers. Cancer centers are very well appreciated by the people in the community. Cancer centers are very well appreciated by the young students and physicians and scientists in training who enter the profession. Cancer centers are places of healing and discovery, and they are very important links between the placing of science and technology into human service.

The budget to support the core grants in cancer center over the past 4 or 5 years has increased at a rate of about 4 percent per year. During that same time the NIH budget has increased by 50 percent over those years and about 45 percent for the NCI budget.

So I believe that we would like to strongly endorse the budget recommendation of $118 million for cancer center core grants and urge that this is an important step in bringing science to the bedside.

We would also urge your attention to the request for construction and equipment grants. Our facilities are crowded. They are becoming technologically obsolescent, and they are well in need of deserved renewal.

Our reasons for these recommendations, I think no one needs to be reminded of the major societal burden which cancer causes. We firmly believe that there has been very significant stepwise progress made in understanding and improved treatment of cancer. We see much promise through further application of research to human disease and its treatment, and we urge that cancer centers are pivotal to this progress.

PREPARED STATEMENT

So we will thank you very much again for your continued support and urge you on in the future, and if we can be of help we are ready.

Senator WEICKER. Thank you, Dr. Owens, very much for your testimony.

[The statement follows:]

STATEMENT OF DR. ALBERT H. OWENS, JR.

Mr. Chairman, I am Albert H. Owens, Jr., M.D., President of the Johns Hopkins Hospital in Baltimore, Maryland. Today I am testifying on behalf of the American Society of Clinical Oncology (ASCO) as Chairman of the Public Issues Committee.

Although you may be familiar with our organization, I would like to describe it for the record, to place our concerns in perspective.

The American Society of Clinical Oncology was founded 20 years ago and has become the nation's larget organization of specialists involved in providing cancer patient care, conducting clinical cancer research and training cancer physician specialists. Members of this Society are involved directly, or as consultants, in the care of the majority of the cancer patients in the United States. Its members include the nation's leading physicians in medical oncology, pediatric oncology, radiation oncology, surgical oncology, gynecologic oncology, and also basic scientists in pathology, immunology, pharmacology, biostatistics, and other areas of basic biomedical science. Collectively, this Society represents the nation's major resource of specialists in the diagnosis and treatment of cancer patients, the application of research to cancer patients and the training of the cancer physicians and clinical researchers of the future. Approximately half of its members are practicing physicians caring for the nation's cancer patients in their offices and in many community hospitals, and half are engaged in research and training in literally all of the nation's schools of medicine, cancer hospitals, centers and institutes.

Thank you for your support last year and this year.

First, Mr. Chairman, ASCO would like to thank you for your very strong support, increasing NIH overall funding last year by nearly 20%, and giving the National Cancer Institute a very large and healthy increase. We also thank you for thwarting the Office of Management and

Budget's request to carry over portions of the funding from fiscal year 1987 to fiscal year 1988.

Your support was particularly welcome to the biomedical research community in this time of very tight budgets and we are deeply grateful.

We support the following appropriations levels:

ASCO supports for the National Cancer Institute (NCI) a funding level of $1.7 billion for fiscal year 1988. This level called for in the "By-Pass Budget" of the NCI, a budgetary process mandated by the National Cancer Act, has been arrived at by experts in public policy in the field of cancer research. Additionally, Mr. Chairman, there is a dire need for funding for construction grants and for equipment. Biomedical research requires sufficient space and up to date equipment. Thus we support the Ad Hoc Group for Medical Research Funding request of $7.6 billion, including funding for construction and research instrumentation.

Cancer Clinical Treatment Research:

Mr. Chairman, because many Members on the Appropriations Committee and professional and personal staff are new, ASCO feels it would be useful to describe the NCI cancer clinical treatment research program.

The objective of clinical (treatment) research is the development of improved cancer therapy. There is a logical progression from basic laboratory science to exploratory (phase I & II) studies and finally to large phase II trials definitively testing the new treatment strategy. These phase II trials generally randomize patients to receive either the new treatment or the best standard therapy. Because they are complex in design, and involve hundreds of patients, they are expensive and frequently take 3-5 years. NCI supports clinical treatment research primarily through research contracts for early clinical phases of new drug development and via large cooperative agreements with the Clinical Cooperative Groups.

Expression of Concerns:

We are very concerned about two patterns of funding for NCI programs. The first is funding for clinical research. Opportunities for clinical research currently far exceed the money currently available. We urge this Committee to review the clinical research program at the NCI so that it may fully understand the required increased funding.

Secondary, regarding inadequate funding of cancer centers. Funding for cancer centers has increased by only about 4% per year. That is approximately 19% over the last five years. This is in comparison to an increase in funding of the NCI of 45% and the NIH of 50%.

Research Advances:

As a result of your support, there have been research advances during the past year.

For the first time, data from the NSABP show a statistically significantly improved survival for patients with colon cancer treated with adjuvant chemotherapy. Colorectal cancer is the second most common cancer site affecting 145,000 U.S. citizens and killing 60,000 each year.

Even conservative investigators agree that immune therapy with IL2 and LAC cells result in responses in two tumors for which effective chemotherapy does not exist (melanoma and renal cancer). This is a particularly important observation in that it represents one of our first evlauations of active biologicals.

New active drugs have been identified. Ifosfamide is certainly active in sarcomas and may be as active as our currently most active standard drug, Adriamycin. In addition to its activity in sarcomas, Dr. Einhorn at Indiana has observed cures in testis cancer treated with this drug in combination.

And finally, although bone marrow transplantation has been recognized as curative in 50% of appropriate patients with leukemia, multiple institutes are now reporting cures in patients with lymphoma. A few institutes are attempting to extend such treatment to the more common cancers (such as breast cancer, sarcomas and lung cancers) with a few long-term survivors.

I will be pleased to answer any questions you may have.

STATEMENT OF DR. JOHN F. POTTER, PRESIDENT, ASSOCIATION OF AMERICAN CANCER INSTITUTES, AND DIRECTOR, VINCENT T. LOMBARDI CANCER RESEARCH CENTER

Senator WEICKER. Dr. John Potter, president of the Association of American Cancer Institutes.

Dr. POTTER. Senator Weicker, I appreciate the opportunity to appear before you to present the concerns of the Association of American Cancer Institutes, which includes all the major cancer centers in the Nation.

I am Dr. John Potter, president of the association, and also the director of the Vincent T. Lombardi Cancer Research Center at Georgetown University here in Washington, DC.

PREPARED STATEMENT

Senator, first may I ask your indulgence in presenting for the record the testimony of Dr. John Ultmann, who is the chairman of the National Coalition for Cancer Research, and who could not be here today, unfortunately, but requests, and we request that his testimony be made a part of the public record.

Senator WEICKER. His testimony will be made a part of the record.

[The statement follows:]

Statement of Dr. John Ultmann, Chairman, National Coalition for Cancer Research

Mr. Chairman, members of the committee, My name is Dr. John Ultmann. My job is a full-time one at the University of Chicago where I am Director of the Cancer Research Center. I am also, the Chairman of the National Coalition for Cancer Research. A group made up of nearly every major cancer research, cancer care and lay group in this country. We represent over 65,000 cancer researchers and 325 cancer hospitals, centers, and clinics across the country. Members include:

Mrs. Mary Lasker
American Association for Cancer Research
American Society of Clinical Oncology
American Society of Hematology
American Society for Therapeutic Radiology
    and Oncology
Association of American Cancer Institutes
Association of Community Cancer Centers
Candlelighters
Oncology Nursing Society
Radiation Research Society
The Society of Gynecologic Oncologists
The Society of Surgical Oncology

Cost of Health Care

Since it can be estimated that the cost of health care which now exceeds $400 billion annually will continue to grow until at least the turn of the century, an analysis of ways to reduce the costs of medical care must address the identification of causal factors, prevention, early diagnosis and effective treatment of some dread diseases.

Since medical care must be considered a high tech industry, it might be profitable to look at the commitments to research made by other high tech enterprises. These range from a low level of 5% to as much as 20% of the gross of many corporations.

If one applies just the low figure of 5% to the current $400 billion costs of medical care in this country, one should obtain a minimum number of dollars that should be committed to research to solve current problems and prevent additional expenditures in the future. Such a calculation leads one to think that $20 billion should be expended for biologic research. Clearly, if one takes the NIH, the NSF, and other federal biomedical programs, together with corporate research, this amount is not anywhere reached.

The above financial considerations and the knowledge that there now exist enormous opportunities in biomedical research (molecular biology, genetics, immunology, brain research, etc.) an expenditure of $7.4 billion for the National Institutes of Health (and $1.7 billion for the National Cancer Institute in particular) should not be considered excessive, but rather looked upon as an investment in the welfare for our population and just plain good sense as an investment in controlling our health care costs and in spawning new industries.

Although the citizens of our country are afraid of nuclear war and agree that appropriate expenditure should be made in the defense of this country, they are even more afraid of cancer and degenerative diseases. Nuclear war and war in general seems more remote than dread diseases which our citizens confront daily in friends and relatives who have and are dying of these diseases.

Cancer By-pass Budget

One of the best kept secrets, but little used parts of the National Cancer Act of 1971, is the By-Pass budget section. Simply put, this mandates that the NCI must develop a budget each year and justify its proposed expenditures. The National Cancer Institute's recommendations "by-pass" the entire executive budget process and are sent directly to the President for his information and action.

This document has a wealth of information on the needs and on the opportunities in cancer research. The bottom line is a budget request of $1.7 billion for the National Cancer Institute in Fiscal Year 1988.

With the passage of the National Cancer Act of 1971, a new impetus was directed towards the National Cancer Program. This increased emphasis led to a period of rapid growth for the National Cancer Program - a growth which has proven its value by the recent explosion in the biotechnology field and in improving life span for many cancer victims.
During the past decade, the budget for the National Cancer Institute has experienced a modest increase, but there has actually been a decrease in the "purchasing power" of NCI's dollars.

While there is a large number of highly qualified research project grant applications that encompass most of the scientific research areas, many of the components of the National Cancer Program require different support mechanisms "including cooperative agreements, R & D contracts, and intramural research" and a more direct involvement the Federal sector which is accomplished through the use of clinical trials, epidemiological investigations, drug screening and development efforts, and prevention efforts. Everyone of these programs has been cut in constant dollars since 1980, as compared with the increase accorded research project grants.

I would use the centers program as a specific example of a long neglected need. The Cancer Centers program across this nation is the backbone of much of our research and treatment effort, yet for each of the last few years, their budgets have grown less than 5%. What that simply and tragically means is that there have been cutbacks nationwide in our cancer research, treatment and community programs. This cannot continue.

Here are some additional specific points for your consideration:

We have deep concern over the proposed advanced appropriations. It does not established stability and it does not take into account 5 and 7 year awards -- everything assumes 3 year grants.

The National Coalition for Cancer Research wishes to go on record to totally support the budget recommendations of the Ad Hoc Group for Medical Research. It is essential that the research enterprises be viewed in an entire context - not just grants, contracts, or training.

Research is only as good as its individual parts. Grants are very important, but they are really the last step in the process.

*First, we must have an adequate number of well trained researchers.

Research Training: Data from the National Academy of Sciences (NAS), strongly indicate a shortage of certain types of biomedical scientists, and support predictions of much greater shortages in certain fields in the near future. It is essential that additional individuals be trained in the biomedical sciences so that the expanded research enterprise envisioned can be sustained over the long-term. Because the training period for a fully-qualified investigator is so long - generally at least seven years after baccalaureate training - it is critical that trainees enter the pipeline as soon as possible.

*Second, it is slow and often counter-productive to do research without the proper equipment.

Research Instrumentation: In FY 1987, Congress appropriated $16 million for the small instrumentation grant program in recognition of documented needs at most research institutions. This program must continue and be expanded to maintain the pace of quality research.

*Thirdly, little research can take place without a roof over our heads.

Renovation of Research and Animal Facilities: The current inventory of research space in which NIH extramural research is conducted has deteriorated and must be upgraded as soon as possible. At this time, the Ad Hoc Group is requesting funds for repair, renovation and replacement, not new facilities.

This task will require enormous resources - about $550 million annually to maintain the current inventory of space - far beyond what can be reasonably expected in the immediate future. Therefore, the Ad Hoc Group requests that a "down payment" of $200 million be provided for facilities in FY 1988.

Animal facilities at many institutions need to be improved, particularly in light of more stringent requirements recently adopted by the Public Health Service and additional standards imposed by Congress in 1985. Congress wisely addressed this area in FY 1987 and the Ad Hoc Group urges that additional resources be provided in FY 1988 $38 million over maintenance of current program balance.

With this accomplished, then we get into the mission of research - - discovery of new information and application to prevention, treatment, and cures.

This is specifically accomplished through contracts, clinical trials, public education programs, centers and research grants.

We are not supportive of a specific number of grants in the bill. We are supportive of a balanced research approach. The Institute directors must have the facility to shift resources where they can do the most good.

In closing Mr. Chairman, let me thank you and all the members of your committee for rejecting the OMB's plan to illegally withhold $334 million in funding for the NIH.

You continue to breath life into the programs that truly and compassionately affect every person in this great country. Our citizens want to support medical research both basic and clinical.

We have the resources, we continue to develop the knowledge the only question that remains is :

Do we have the will?

Dr. POTTER. Senator, over the last several years this committee has given very strong support to the Cancer Centers Program. One needs only to read the remarks of high praise in the bill reports of the last several appropriations bills to realize that the Cancer Centers Program is held in very high regard by the Congress.

It is clear also that the bypass budget also indicates that there are great expectations for the Cancer Centers Program, based on the excellence of their past efforts. However, it should be understood, Senator, that your hopes and the expectations of the American public simply cannot be met given the low budget levels that have existed for cancer centers over the last several years.

Dr. Vincent DeVita, director of the National Cancer Institute, laid out the problem very succinctly when he reported to the National Cancer Advisory Board that the NCI had adopted an interim funding strategy that would pay cancer centers at only 85 percent of peer reviewed recommended levels. Even at that, a $3.6 million shortfall was projected.

Dr. DeVita indicated that such a funding plan was required in spite of the very serious concern expressed last year by the Senate Appropriations Committee about funding levels for cancer centers. Unfortunately, Senator, as a result of the Senate-House conference and other budgetary pressures, the funds were simply not available in the appropriation to fund cancer centers appropriately.

Dr. DeVita commented, the 5.4-percent increase for the Cancer Centers Program in fiscal year 1987 represented the lowest percentage increase to any program at NCI for that fiscal year. Here are the specifics.

The Cancer Centers Program, since fiscal year 1983, has had an increase of 19 percent, while the NCI budget has increased by 45 percent and the NIH budget itself over 50 percent.

We believe that the best analysis of the situation is presented in the bypass budget. This indicates that the number of cancer centers should be increased by 50 percent by the year 1992, to achieve a 50-percent reduction in cancer mortality.

I present very briefly three documents from page 8 of the bypass budget, which shows that the percentage change from fiscal year 1980 to fiscal year 1987 in terms of constant dollars. As you can see there has been a dropoff of 10 percent in constant dollars for cancer centers.

The second chart, showing obligations by mechanisms of current dollars, shows that the cancer centers have received a very small increase over the years in terms of current dollars. An entire decade has passed without an increase in total dollars sufficient to fund cancer centers appropriately.

The third chart shows the budget request for cancer centers requires a need of $118 million for fiscal year 1988. Again, as Dr. Owens has mentioned, we strongly support the bypass budget chart which shows a need for an increase in construction for cancer facilities for fiscal year 1988 of $35 million, rising to $44 million in 1992.

In summary, then, Senator, allow me to indicate our support for appropriations at the following levels. For the Cancer Centers Program, an appropriation of $118 million for fiscal year 1988. For the National Cancer Institute, we support the budget level of $1.7 billion. And for the NIH overall, we support a level of $7.69 billion.

PREPARED STATEMENT

Once again, Senator, I would like to thank the committee and you personally for your well-recognized support of biomedical research and also, of course, for funding support for the National Cancer Institute.

Senator WEICKER. Thank you very much, Dr. Potter, for your testimony.

[The statement follows:]

STATEMENT OF DR. JOHN F. POTTER

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you to present the concerns of the Association of American Cancer Institutes, which includes all of the major cancer centers in the nation.

I am Dr. John F. Potter, President of the Association, and also Director of the Vincent T. Lombardi Cancer Research Center at Georgetown University here in Washington, D. C.

Mr. Chairman, we have several matters to bring before you today, and they will be commented on in the body of this testimony. However, first we wish to thank you for the very strong position you and your colleagues on this Subcommittee took regarding the proposed Administration "carryover" of NIH fiscal year 1987 funds to fiscal year 1988 ($64 million would have been "carried over" for the NCI).

It is our understanding that the issue is now substantially resolved, inasmuch as you and your colleagues have indicated that you simply will not accept this proposal. Once again you have come to the aid of the biomedical research programs of the nation, and particularly those of the National Cancer Institute, and for that we are deeply grateful.

Mr. Chairman, over the last several years this committee, and its counterpart appropriations subcommittee in the other house of Congress, as well as the authorization committees of both the House and Senate, have given very strong policy support to the cancer centers program at the National Cancer Institute. One needs only to read the remarks of high praise in the bill reports of the last several appropriations bills from both the Senate and House to realize that the cancer centers program seems to be held in very high regard by the Congress. It is clear, also, that the By-Pass Budget, which is prepared and submitted directly to the President in accordance with legislation contained within the National Cancer Act, and which has been agreed to by the National Cancer Advisory Board, also indicates that there are great expectations for the Cancer Centers program at the Institute based on the excellence of past efforts.

However, it should be understood that your hopes and the expectations of the American public simply cannot be met given the low budget levels that have existed for cancer centers over the last several years.

We believe that Dr. Vincent DeVita, Director of the National Cancer Institute, laid out the problem very succinctly when he reported to the National Cancer Advisory Board on December 8, 1986. Dr. DeVita indicated that the National Cancer Institute had adopted an interim funding strategy that would pay the Center grants at only 85% of peer review recommended levels. Even then a $3.6 million shortfall was still projected.

Dr. DeVita indicated that such a funding plan was required in spite of the very serious concern expressed last year by the Senate Appropriations Committee about funding levels for cancer centers. The Senate bill report states,

> "The Committee has increased NCI's Cancer Center appropriation in order to fund one additional Cancer Center and to fund all Cancer Centers at approximately their peer review approved levels so that a sense of stability and continuity can be reintroduced into the Cancer Center programs."

Unhappily, Mr. Chairman, as a result of the Senate-House conference and other budgetary pressures, the funds simply were not available in the appropriation to do just that. In fact, as Dr. DeVita said to the National Cancer Advisory Board on December 7, "The 5.4% increase for the Cancer Centers program in fiscal year 1987 represented the lowest percentage increase to any program at the NCI for that fiscal year."

Dr. DeVita commented, "It is a chronically underfunded program...and we may be facing this problem for a number of years into the future."

Here are the specifics: The cancer centers program, since fiscal year 1983, has had an increase of 19%, while the NCI budget has been increased by 45%, and the NIH budget itself, over 50%.

	Cancer Centers		NCI	NIH
FY '83	$77.3 million		$987 million	$4.0 billion
FY '84	$79.6	(3% increase)	---	---
FY '85	$84.8	(6.3% increase)	---	---
FY '86	$88.4	(4.2% increase)	---	---
FY '87	$93.3	$5.6% increase)	$1.4 billion	$6.1 billion
	19% increase		45% increase	50% increase

Everyone concerned with the cancer centers program recognizes this problem of severe underfunding, it seems, but insufficient appropriations have prevented the solution of this problem.

At a time when there is chronic underfunding, the pressures on the Cancer Centers Program are quite intense.

Competition for new Centers is constant. In fiscal year 1986 two new centers were funded and probably two new centers will be funded in fiscal year 1987. The inevitable consequence of such budget constraints, therefore, is that some centers could not be funded at the time of competitive renewal based on priority scores, and two existing cancer centers will be phased out in 1987. A higher level of funding would have prevented this loss.

The consortium cancer center support grant, which was approved and activated in 1985, competes for funds from the cancer center budget. This instrument was designed to support prevention and cancer control research in regions where the centers are located. Partnerships with state, city or county health departments,as well as other health agencies, are expected to be formed with the cancer centers funded with this type of grant. Two consortiums are currently funded and one planning grant has been made available for a minority consortium.

We believe that perhaps the best analysis of the situation is presented in the By-Pass Budget, referred to above. It indicates that the number of Cancer Centers should be increased by 50% by 1992. According to the By-Pass Budget this increase in the centers is part of the planned set of initiatives needed to achieve a 50% reduction in cancer mortality, which is the goal for the year 2000 of the NCI.

Mr. Chairman, I think that it might be useful for you to look at several charts which have been prepared as part of the By-Pass Budget document which clearly lay out the nature of the problem. (Appendix attached)

The first document (chart #1) is drawn from page 8 of the By-Pass Budget, and it shows the percentage change between fiscal year 1980 as compared to fiscal year 1987 in terms of constant dollars for cancer centers. As you can see, yellow-marked, in fact there has been a drop-off of 10% in terms of constant dollars at a time when the pressures are extremely intense to improve the cancer center network.

The second document (chart #2) is from page 9 of the By-Pass Budget showing the obligations by mechanisms of current dollars, and as you can see, yellow-marked, the cancer centers have received a very small increase over the years in terms of current dollars. An entire decade has passed without an increase in total dollars sufficient to fund cancer centers appropriately.

The next chart (#3) is the By-Pass Budget 1988 budget request which shows the request for cancer center support of $118,236,000 for fiscal year 1988.

Another chart will be of interest to you, and that is the indication of the By-Pass Budget for requirements for cancer centers through the year 1992. As you can see, it is expected by the By-Pass Budget that costs will run to $166.6 million in 1992 in order to fulfill the requirements of the cancer centers program in assisting the reduction of cancer mortality in the nation.

In line with these recommendations, Mr. Chairman, we also call to your attention the fact that the By-Pass Budget chart just referred to also requests a

construction figure for fiscal year 1988 of $35 million, rising to $44 million in 1992. The last year's budget for construction was $5 million. An increase in construction funds is vital for us to continue our progress.

Mr. Chairman, I have taken your time to lay out the case quite precisely, using the data shown in the By-Pass Budget prepared by the National Cancer Institute, in consultation with the National Cancer Advisory Board as required by law.

SUMMARY: In summary, then, allow me to indicate our support for appropriations at the following levels:

For the Cancer Centers Program, an appropriation of $118 million for fiscal year 1988; for the National Cancer Institute for fiscal year 1988 we support the budget level of $1.7 billion, and for the NIH overall we support the Ad Hoc Group for Medical Research Funding of $7.690 billion.

We also support the request of the National Coalition for Cancer Research, of which our Association is a member.

Mr. Chairman, I will be pleased to answer any questions that you may have.

APPENDIX

Chart #1

Percent Change - FY 1980 Compared to FY 1987
Constant Dollars

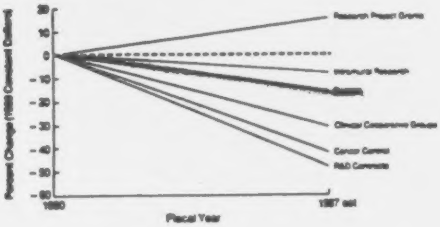


Chart #2

Obligations By Mechanism - Current Dollars

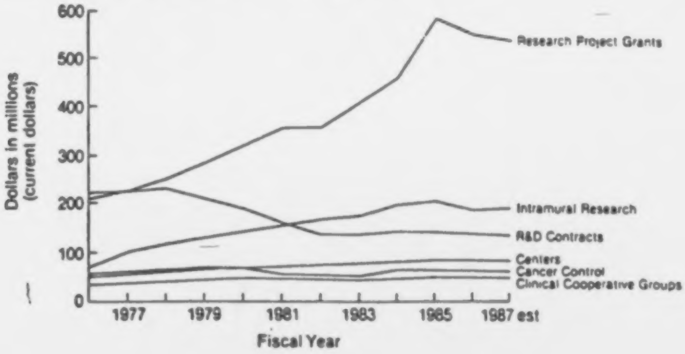


Chart #3

NATIONAL CANCER INSTITUTE
1988 BUDGET REQUEST
CROSSWALK OF BUDGET ACTIVITY TO MECHANISM - 1988
(IN THOUSANDS OF DOLLARS)

	RESEARCH PROJECTS	RESEARCH CENTERS	OTHER RESEARCH	TRAINING	R&D CONTRACTS	INTRAMURAL RESEARCH	RSCH MGMT & SUPPORT	CA PREV. & CONTROL	CANCER CONSTR.	SPECIAL INITIATIVE	TOTAL
RESEARCH											
CAUSE & PREVENTION	$237,225		$2,479		$87,714	$53,310	$21,917				$402,645
DETECTION & DIAGNOSIS	62,321		80		20,898	18,759	5,627				107,685
TREATMENT	201,030		79,072		109,777	103,283	24,430	3,188			520,780
CANCER BIOLOGY	212,741		7,184		9,037	70,463	12,699				312,124
SUBTOTAL	713,317		88,815		227,426	245,815	64,673	3,188			1,343,234
RESOURCE DEVELOPMENT											
CANCER CENTERS SUPPORT		116,600					1,636				118,236
RESEARCH MANPOWER DEVELOPMENT			14,000	36,000			2,920				52,920
CONSTRUCTION							633		35,200		35,833
SUBTOTAL		116,600	14,000	36,000			5,189		35,200		206,989
CANCER PREVENTION AND CONTROL							6,731	93,046			99,777
SUBTOTAL	713,317	116,600	102,815	36,000	227,426	245,815	76,593	96,234	35,200		1,650,000
SPECIAL INITIATIVE										50,000	50,000
TOTAL, NCI	$713,317	$116,600	$102,815	$36,000	$227,426	$245,815	$76,593	$96,234	$35,200	$50,000	$1,700,000

STATEMENT OF DR. ROBERT MCKENNA, PAST PRESIDENT, AMERICAN CANCER SOCIETY, AND COCHAIRMAN, NATIONAL PUBLIC ISSUES COMMITTEE

Senator WEICKER. Dr. Robert McKenna, of the American Cancer Society.

Dr. MCKENNA. Senator Weicker, I am pleased to be here on the part of the American Cancer Society to present our proposal for the fiscal year 1988 citizen's budget for the National Cancer Institute.

I am a practicing surgical oncologist in Los Angeles, a recent past president of the American Cancer Society, and currently chairman of the public issues committee for the National ACS.

Each year ACS recommends to the Congress a citizen's budget figure for the National Cancer Institute for the coming year. Traditionally this figure has represented the best judgment of the society regarding that portion of our country's national resources, which we believe our Government should dedicate to the battle against cancer.

Mr. Chairman, the American Cancer Society comes before you as the nongovernment, nonprofit, private sector authority on cancer. We have more than 2 million volunteers who serve the people of this Nation in every State, county, and community at no cost to the Government.

Support of cancer research is one of our major activities. In 1986 we provided more than $85 million in support of peer-reviewed research. Additionally we allocated $50 million of voluntarily donated funds to public education, over $55 million to patient and community services, and over $30 million to professional education. The society, therefore, is the single largest source for private, noncommercial funding for cancer research and cancer control.

For the fiscal year 1988 the American Cancer Society recommends an appropriation of a minimum of $1.5 billion for cancer research and control for the National Cancer Institute. We understand that the National Cancer Institute will receive, as it did in the fiscal year 1987 appropriation, an additional and substantial amount for AIDS research.

The AIDS position is separate from our recommendations. We feel strongly that there should be support, but we do not want to confuse the AIDS and the cancer budgets which are mixed together in the appropriations for the NCI. Therefore, we believe that the basic budget for the NCI should be $1.5 billion for cancer.

We believe this appropriation, representing an 11.9-percent increase over last year for cancer research and control, is justified, practical, prudent, and realistic. Cancer continues to represent the major ongoing health concern of Americans. Cancer research has proven to be a principal source of fundamental knowledge in understanding the problem of AIDS.

While we agree that it is appropriate to include an additional amount for AIDS research to the NCI appropriation, we are concerned that in determining the final overall figure for NCI that Congress keep in mind that there are two distinct elements of that final figure. The traditional NCI appropriation, including research, control, construction, training and the like on the one hand, and AIDS research on the other.

PREPARED STATEMENT

We would like to bring this effort of research to the medical and scientific community, capitalize more quickly on some of our dramatic and important developments in cancer which have taken place. We earnestly support your help continuing this record through an appropriation of $1.5 billion. Thank you.

Senator WEICKER. Thank you very much, Dr. McKenna.

[The statement follows:]

STATEMENT OF DR. ROBERT MCKENNA

Mr. Chairman and members of the committee. I am pleased to be here today to present on the behalf of the American Cancer Society a proposal for an FY 1988 "Citizen's Budget for the National Cancer Institute.

I am Dr. Robert J. McKenna. I am a Past President of the American Cancer Society and Co-Chairman of the National Public Issues Committee. In addition, I am a clinical professor of surgery at USC Medical Center in Los Angeles, and a practicing oncologic surgeon in the Los Angeles area.

Mr. Chairman, each year the American Cancer Society (ACS) recommends to the Congress a "Citizen's Budget" figure for the National Cancer Institute for the coming fiscal year. Traditionally, this figure has represented the best judgment of the Society regarding that portion of our country's national resources which we believe our government should dedicate to the battle against cancer. Characteristically, the Society's figure has been considerably higher than that recommended by the President in his annual budget message. While the Society's annual recommendation has been higher, it has in every instance represented the Society's attempt to be practical and responsible, and at the same time, be realistic concerning the amount of funding necessary to fight cancer during that year.

Mr. Chairman, the American Cancer Society comes before you as the non-government, non-profit private sector authority on cancer. Our more than 2,000,000 volunteers serve the people of this nation in every state, county, and community, at no cost to the government. Support of cancer research is one of our major activities. In 1986, ACS provided more than $85 million in support of peer reviewed research. Additionally, we allocated over $50 million of our voluntarily donated funds to public education; over $55 million to patient and community services; and almost $30 million to professional education. The Society is the largest single source of private, non-commercial funding for cancer research and control.

In 1986, the President of the American Cancer Society, Dr. Charles LeMaistre, presented the Society's recommendation of a 1987 appropriation of $1.320 billion. We were delighted and gratified that the Congress not only met but exceeded our Citizen's Budget figure by $21 million, passing an NCI appropriation of $1.341 billion, plus an additional $61 million for AIDS research. The total amount for NCI totalled $1.402 billion.

The American Cancer Society applauds and congratulates the Congress, and particularly, this subcommittee, its leadership and its members for your foresight and your sensitivity to the continuing importance of cancer research and control through your realistic appropriations for the NCI.

For fiscal year 1988, the American Cancer Society recommends an appropriation of a minimum of $1.5 billion for cancer research and control for the National Cancer Institute. We understand that the National Cancer Institute will receive, as it did in its FY '87 appropriation, an additional and substantial amount for AIDS research. The ACS has not taken a position on an appropriation figure for AIDS. We do feel strongly, however, if it is your intention to attach a figure for support of AIDS research to the NCI appropriation, it should be over and above the $1.5 billion minimum figure we are recommending.

Mr. Chairman, we believe that an appropriation of the $1.5 billion, representing an 11.9% increase over last year for cancer research and control is justified, practical, prudent and realistic.

We are very concerned about the Administration's proposed 1988 budget for NCI - exclusive of funding for AIDS research. The President is requesting a reduction of $124 million -- this represents a decrease of over a 9 percent. We believe that this is an inappropriate fiscal policy for the nation's health. If the Administration's recommendation prevails, there will be significant loss in the momentum and progress against cancer through basic and applied research.

The progress we are making against this disease cannot survive abrupt reductions, program cancellations, and across the board disruption in personnel. Cancer has no respect for man's other problems and continues to selfishly drain energies and resources of our nation and its people in the amount of more than $40 billion per year in lost wages, jobs, social disruption, and medical costs.

We sincerely believe, Mr. Chairman, that the funds that this committee has appropriated to the National Cancer Institute during the past fifteen years represent one of the most productive health and medical research investment our nation has ever made in terms of real returns for our citizens. In the short span of those few years, more progress has been made against cancer - man's most complex and feared health and medical enemy - than in all of previously recorded history. Cancer continues to represent the major on-going health concern of the American people. AIDS, of course, is currently the top acute health priority, and a problem that concerns all Americans. Cancer research has proven to be a principal source of fundamental knowledge in understanding the problem of AIDS. While we agree that it is appropriate to include an additional amount for AIDS research to the NCI appropriation, we are concerned that in determining a final overall figure for NCI, that Congress keep in mind that there are two distinct elements of that final figure: the traditional NCI appropriation, including research, control, construction, training and the like - on one hand, and AIDS on the other.

Despite your generosity in FY '87, support for cancer research continues to suffer. Last year NCI was able to fund only 38% of approved research grant applications. If the Administration's recommendation prevails in FY '88, the percentage of funded grant applications would drop below 35% - certainly not the trend in research we think is necessary to assure continued progress against cancer.

An 11.9% increase in the basic NCI appropriation would allow for an important increase to more than 40% in the percentage of research grants that could be funded from among the large number of applications which are approved but are unable to be funded because of budget constraints. An appropriation of $1.5 billion for cancer research and control would bring to the cancer effort the ability for the medical and scientific community to capitalize much more quickly on some of the more dramatic and important research developments in cancer that have taken place in the past year. These developments have come about because of your wisdom and leadership. We earnestly solicit your help in continuing this record through an appropriation of $1.5 billion for NCI for FY '88.

Thank you Mr. Chairman. I'd be delighted to answer any questions.

STATEMENT OF JAMES GUILINGER, PRESIDENT, AMERICAN VOCATIONAL ASSOCIATION

Senator WEICKER. Our last witness this morning is James Guilinger, president of the American Vocational Association. Mr. Guilinger?

Mr. GUILINGER. Senator Chiles, I am Jim Guilinger, vocational agriculture-agribusiness teacher at Sycamore, IL. I am here to speak on behalf of the 47,000 vocational educators who are members of the American Vocational Association, of which I currently serve as president.

Vocational educators are extremely appreciative of the efforts of this committee down through the years in the support of vocational education. I have submitted a longer statement in writing, which I am requesting that you enter into the record. I would like to deal briefly with five national priorities, which vocational education can make a significant contribution to this Nation.

Federal support for vocational education strengthens America's competitiveness by encouraging the development of highly skilled new workers and the retraining of the existing work force by moving new technology into the hands of workers, by encouraging entrepreneurship and small business development, by supporting research and innovation of vocational education programs, and by promoting partnerships with business and industry and by supporting training for the chronically unemployed.

One of the two major thrusts of the Carl Perkins Act is to assist special populations in gaining access to vocational education, and on the average Federal dollars contribute about 25 percent of total funding for programs of the 3 million disadvantaged and handicapped students across this land.

Programs serving single parents and housemakers, along with programs to eliminate sex bias and stereotyping are also greatly affected by the Federal funding cuts. Instilling basic skills in math, science, English in students is a national educational priority, and vocational education addresses this in a unique fashion.

Students who have difficulty in the traditional academic setting often improve academically when basic skills are presented in real life terms in vocational classes. And as a classroom teacher of 35 years experience, I can personally attest to that statement.

Federal funds contribute to quality in vocational education by providing the major source of seed money to improve existing curricula and support dissemination of information on future job training needs.

Last, when we look at dropouts, nearly 30 percent of the American students, about 1 million each year, never complete high school. Dropouts will each add about $26,000 over their work lives to the future social costs of this country, and vocational education can help reduce that social cost, we believe.

In light of the national priorities, the AVA is recommending fiscal year 1988 appropriations of $944 million. This level of support would provide current services funding for most programs now supported under the act.

We are seeking new funding in two areas. Support for guidance and counseling is provided for in the law, but no dollars have been appropriated since the legislation was enacted. And we encourage funding at the authorized level of $1 million.

The vital importance of the family in assuring worker productivity and stability makes the mission of consumer and homemaking education programs more essential today than ever before. Therefore, we recommend increasing appropriations in this area to $50 million.

PREPARED STATEMENT

Thank you, Senator Weicker, and the other members of your committee for the opportunity to address this body regarding the significance of Federal support for vocational education.

[The statement follows:]

STATEMENT OF JAMES GUILINGER

I am Jim Guilinger, a vocational agriculture instructor from Sycamore, Illinois. I am here today to speak on behalf of the more than 47,000 vocational educators who are members of the American Vocational Association, the major professional association for the field of vocational education. I am currently serving as president of AVA.

Vocational educators are extremely appreciative of the support this committee has given to vocational education. We want you to know, Mr. Chairman, that without your support, there would be significantly less emphasis on vocational education in all the states.

These are tough economic times for our nation. No one knows it better than vocational educators who every day work with citizens who have lost their jobs and need retraining, individuals without skills that will land them a berth in the American workplace, youth seeking that first opportunity to enter the world of work, and businesses which are feeling the impact of foreign competition and rapidly changing technology. In fact, we in vocational education stand at the crossroads where the needs of individuals and those of business and industry should meet and become in tune.

This is why we come before you today to urge continued vigorous support for our programs. We do so with full understanding of the budget constraints under which you are operating. In such times of fiscal stringency, every investment must be carefully considered in terms of the return it will yield for the national good. It is by this yardstick we would ask you to measure vocational education.

There are at least five national priorities that clearly call for strong vocational education programs. Let's look at the current contributions and potential of vocational education in each of these critical areas.

Competitiveness

The loss of U.S. dominance in the world market represented by a trade deficit of nearly $170 billion in 1986 is among the hottest items on the national agenda. Both houses of Congress are considering competitiveness bills to address the intense international competition.

The established vocational education system--more than 26,000 institutions which prepare two million workers for the marketplace annually--is a vital resource in the development of a national strategy for enhancing our competitiveness. We are pleased to note that Congressional leaders seem to recognize that fact. The competitiveness legislation under consideration by the House of Representatives includes a significant role for vocational education to be funded through the Carl Perkins Vocational Education Act.

America must work smarter and more efficiently if it is to regain its edge in the world market. Vocational education plays a vital role in making this a reality throughout the workforce.

Employers give high marks to vocational education in two areas that contribute directly to competitiveness. A study conducted in 1985 by the National Center for Research in Vocational Education found that workers who have participated in high school vocational education are three percent more productive as workers than other high school graduates and those who have participated in postsecondary programs are 13 percent more productive. Employers surveyed also reported that vocational students require 10 to 20 percent less on-the-job training, depending on the level of vocational education the students have completed.

Federal support for vocational education strengthens America's competitiveness by:

- Encouraging the development of highly-skilled new workers and the retraining of the existing work force to meet new technical demands.
- Moving new technology into the hands of workers.
- Supporting research and innovation in vocational education programs which already prepare students for 26 of the 37 occupations that the U.S. Bureau of Labor Statistics predicts will create the largest number of new jobs by 1995.
- Encouraging entrepreneurship and small business, which now provide 75 percent of all new jobs. These smaller, innovative companies are highly competitive against foreign competition and rely predominantly on public vocational education programs to provide new workers.
- Promoting in-school "partnership" programs that leverage billions of dollars from corporations annually by using federal "seed" money.

- Supporting training for the chronically unemployed, which "on-the-job" training programs in the private sector don't provide.

Eighty percent of all U.S. jobs don't require a college diploma. But increasingly, they do demand skills that can be provided through good vocational education programs. In fact, 18 of the 20 fastest-growing occupations within the next decade require vocational education as a prerequisite for entry.

Workers will also need continual upgrading and retraining. Half of today's current workforce will be in new careers within five years.

Demographics and changing technology are both contributors to this trend. The "baby bust" of the last two decades will reduce the employment pool of young workers by 22 percent by 1995. Retraining older workers--50 percent of whom say they want to continue working beyond retirement age--will be critical to filling the void.

Through funding provided under the Carl Perkins Vocational Education Act, millions of Americans are being retrained each year. Equipped with new skills, they can continue to contribute productively to the economy while assuring personal self-sufficiency.

Serving Special Populations

One of the two major thrusts of the Carl Perkins Vocational Education Act is to assist special populations deemed to be most in need of vocational education. The legislation specifically identifies six groups: Adults in need of training or retraining, disadvantaged individuals, handicapped individuals, single parents or homemakers, criminal offenders and individuals who participate in programs designed to eliminate sex bias and stereotyping. Fifty-seven percent of the basic state grant is allocated to serve these special populations.

The federal strategy of leveraging private-sector and state and local funding for serving these groups will be increasingly important as fewer new workers enter the job market over the next decade.

Three million secondary and postsecondary students in programs for disadvantaged and handicapped students are the group most heavily dependent upon the federal dollar for support. On average, federal dollars contribute about 25 percent of the total funding for these programs, and some programs receive as much as 50 percent of their funding from federal sources. The vocational education track record in serving these students is remarkably high with 82 percent of the students who complete vocational programs entering employment or continuing their educations.

Programs serving single parents and homemakers, along with programs to eliminate sex bias and stereotyping, are also greatly affected by federal funding cuts. In many cases, these programs are supported entirely by federal dollars.

Federal education funds also provide 24 percent of all federal support for training of the incarcerated, or about $7 million. Studies show that state and local support for these programs is dropping. Some innovative vocational programs have cut the prisoner recidivism rate in half. Yet, fewer than half of all correctional facilities offer any vocational training because of inadequate funding.

Basic Skills Development

The vocational education "practical" approach to learning is unique in education. Yet learning studies have found that this "hands on" method is the most effective way of teaching at least 38 percent of all students. Specifically, students who have difficulty in the traditional academic setting often improve academically when basic skills are presented in "real life" terms in a vocational class.

Studies show that the learning gains in basic skills are approximately the same for students whether they are enrolled in academic, general or vocational programs in high school. This is quite significiant when you consider the fact that vocational education attracts a disproportionate number of disadvantaged students. While these students often start out at a lower academic level, they keep pace with all other students in their learning gains.

Improving Quality

Currently, approximately $351 million in federal support, 43 percent of the basic state grant, is being used solely to improve the quality of vocational education programs. This support helps leverage staggering amounts in private sector funds for vocational education through "partnership" programs at the state and local level. The loss of this funding, representing about 30 percent of the $30-$40 billion which business and industry spends annually on training, would drastically reduce corporate-funded programs in the public school system.

Further, many of the highly-effective and innovative customized training programs now available to business and industry in 44 states are supported by federal vocational dollars.

Program quality can be measured by outcomes. Non-college-bound high school students who take at least four vocational courses during their last three years of high school are 23 percent more likely to be employed than their non-vocational peers, receive an eight percent higher wage and earn 47 percent more income. These facts are crucial considering the fact that approximately two-thirds of the young adults ages 19 to 26 will not complete education beyond high school.

Federal funds contribute to quality by providing:

- The major source of "seed" money at the state and local level to improve existing curricula and encourage replacement of antiquated programs with innovative ones.
- The major source of information on future job-training needs through the National Occupational Information Coordinating Committee and its state affiliates and a national network of national and state advisory councils.
- A cost-effective method of sharing curriculum information and products through six regional Curriculum Coordinating Centers. The centers saved $9.5 million in costs by providing technical assistance to states in 1985.
- Technical Committees, which advise and make recommendations about program curricula at the state level.

The Dropout Problem

Nearly 30 percent--about one million each year--of America's students never complete high school. Without some type of intervention, such as a high quality vocational program, another 300,000 students are "at risk" of dropping out.

Dropouts will each add about $26,000 over their worklives to future social costs and will earn $237 billion less in wages compared to high school graduates. Those reduced salaries will cause a loss of $71 billion in taxes to local and state governments. Yet a recent report indicates that taxpayers can save approximately $12.49 in future social costs for every $1.00 they invest toward keeping students in school.

Vocational education alone cannot solve the dropout problem. But the number of dropouts who were once in a high school vocational curriculum is significantly less than the number of dropouts with similar backgrounds who were not.

Further, vocational education works to attack illiteracy, drug abuse, teen pregnancy and other youth-related problems by teaching basic skills, developing self-discipline and providing guidance through student organizations.

Tackling the Priorities

Vocational education is an extremely important educational alternative and one that is especially appropriate in light of today's priorities. It uniquely cuts across boundaries of educational level, age, social condition and economic status.

The federal role in vocational education as a catalyst for excellence and for the expansion of access is clear. That federal influence is essential for assuring the country's united drive to achieve the most highly-educated and best-skilled work force in the world.

The states have traditionally followed the federal lead in improving and expanding vocational education programs. Their support, outmatching the federal investment by ten to one, pays the bills for the day-to-day operation of the programs. A better scheme could not have been conceived.

The federal presence coalesces, shapes, directs, offers incentives and provides resources to assure a dynamic system. But without the $1 in federal support, all sense of national purpose would be lost.

AVA's Legislative Recommendations

The American Vocational Association is recommending a FY88 appropriation of $944,300 million. This level of support would provide current services funding for most programs currently supported under the Carl Perkins Vocational Education Act. This recommendation includes a 5.1 percent increase, which represents the most recent rise in the Consumer Price Index.

We are seeking new funding in two areas. Support for Guidance and Counseling (Title III-D) is provided for in the Perkins Act but no dollars have been appropriated since the legislation was enacted. In light of the critical importance of comprehensive career guidance and counseling programs in assuring the fullest possible access to vocational education for all segments of the population, we earnestly encourage funding in this area at the authorized level of $1 million. This request is especially appropriate at this time since the U.S. Department of Education, through the National Occupational Information Coordinating Committee guidelines project, is encouraging the development of student-outcome oriented program delivery standards for comprehensive career guidance and counseling programs.

The critical importance of the family in assuring worker productivity and stability, documented in several recent studies, makes the mission of consumer and homemaker education programs more essential today than ever before. The emphasis in the Perkins Act on conducting programs in economically depressed areas, encouraging participation of traditionally underserved populations and improving responses to individual and family crises are in tune with competitiveness priorities. Therefore, we are recommending increasing appropriations in this area to $50 million.

Finally, we wish to go on record in support of the provisions of the proposed Competitiveness Act of 1987, which would provide a total of $100 million in new funds to vocational education through the Vocational Education Act. The legislation would fund public-private partnership programs to meet adult training, retraining and employ-ment development needs and to extend partnerships for high technology training. These initiatives are sorely needed, and we hope they receive the full consideration of the appropriations committee when they become law.

AVA FUNDING RECOMMENDATIONS
FY 88

. State Programs:	
(1) Basic Grants (Title II)	$856,700,000
(2) Community-based Organizations (Title III-A)	6,300,000
(3) Consumer & Homemaking (Title III-B)	50,000,000
(4) Guidance & Counseling (Title III-D)	1,000,000
(5) State Councils (Section 112)	7,900,000
B. National Programs	11,500,000
(1) Indian/Hawaiian Natives	
(2) Research (Title IV-A)	
(3) Demonstrations (Title IV-B)	
(4) Data Systems (Title IV-C)	
C. Bilingual Vocational Training (Title IV-E)	3,800,000
D. Permanent Appropriation (Smith-Hughes Act)	7,100,000
TOTAL	$944,300,000

Conclusion

Vocational education is a national resource with the potential to make significant contributions to improving U.S. competitiveness, building a highly-trained workforce and enhancing educational quality. The federal investment is the catalyst for assuring that programs are finely tuned to address these priorities. As such, there are few investments that can guarantee a higher return.

SUBCOMMITTEE RECESS

Senator WEICKER. Thank you very much, Mr. Guilinger, for your eloquent testimony. The subcommittee will stand in recess until 2:30 p.m. this afternoon, when we will meet again in room SD–116 to hear public witness testimony on the Department of Education.

[Whereupon at 11:30 a.m., Tuesday, May 5, the subcommittee was recessed, to reconvene at 2:30 p.m., the same day.]

(AFTERNOON SESSION, 2:30 P.M., TUESDAY, MAY 5, 1987)

The subcommittee met in room SD-116, Dirksen Senate Office Building, Hon. Lawton Chiles (chairman) presiding.

Present: Senators Chiles, Harkin, Weicker, and Hatfield.

NONDEPARTMENTAL WITNESSES

STATEMENT OF HON. J. JAMES EXON, U.S. SENATOR FROM NEBRASKA

Senator CHILES. We will reconvene this afternoon.

Our beginning witnesses will be talking about the Department of Education funding. We have asked our witnesses to try to hold their statements down to 3 minutes so that everyone will have an opportunity.

Of course, that only applies to real people, and so we have Senator Exon here to speak to us today, followed by Senator Tom Daschle, and we are delighted to have them as witnesses today.

And Senator Exon, if you want to lead off.

Senator EXON. Mr. Chairman, thank you very much.

I think this is the first time in my 9 years—this is my ninth year in the Senate—that I have ever sat across the table from you, and I am generally over there working with you. I hope you can work with me on the matter that I am going to bring up here this afternoon.

I guess you have noticed that I put my pipe away out of deference to you, and so I am trying to be on my best in front of you today. It is not going to take a whole lot longer than that, and it is not very long winded for me. I hope you will bear with me, because I think I have some things to say on impact aid particularly.

I think you and I have worked together on education in general for a long, long time and generally come up with about the same numbers.

And I am delighted to have my colleague from South Dakota here this afternoon.

Chairman Chiles and members of the Labor-HHS Appropriations Subcommittee, I appreciate the opportunity to present testimony on behalf of the Impact Aid Program for fiscal year 1988. I understand that you have quite a list of people and organizations who wish to testify on this overall matter of education, and so I will try and be as brief as possible.

I cannot impress upon you enough the importance of the Impact Aid Program, not only for the 16 school districts in my State that receive funds, but also to the other 2,650 school districts across the Nation that rely on these funds for basic operations and maintenance.

Impact aid is frequently discussed in the same light of Federal assistance as a supplemental program. This is due to the basic lack of understanding of the original intent of the program. Impact aid is not one of the supplemental programs; it is a Federal obligation, a reimbursement to local school districts for services rendered.

Impact aid revenues is intended to provide the basic operation and maintenance money needed to house, transport, educate federally connected children whose parents, for one reason or another, do not contribute their fair share of support to the taxation processes.

This happens because of the nontaxable status of Federal property, Federal activities, and some Federal employees. Impact aid is the Federal Government's attempt to compensate for lost revenue where Federal ownership or Federal activity adversely interferes with any or all of the common local resources normally used to finance public education.

In addition to the district's inability to generate revenue from federally owned property, other tax-reducing burdens are present. For example, cars and mobile homes in many districts are considered personal property and cannot be taxed under the Soldiers' and Sailors Relief Act.

The concept behind impact aid was first recognized in 1950, when the Federal Government realized the severe adverse impact it had on public school districts. By the end of World War II, the sudden and disproportionate infusion of youngsters into the public schools near Federal installations was devastating.

With more children and less revenue, it suddenly became the responsibility of those citizens in the neighborhood to pay significantly higher taxes to subsidize the children generated by these Federal properties, to subsidize unfairly and disproportionately an obligation which should be shared by the entire Nation.

It became blatantly obvious that some type of assistance was needed to pay for local services rendered to those children, who are a national responsibility. This now includes not only military dependents, but children being educated on Indian land and children from federally owned nontaxable low rent housing units as well.

Mr. Chairman, as I am sure you are aware, part B of the Impact Aid Program has been under fire for many years, and this year is no exception. I think that you know and understand very well what the various parts of the part B funding program are, and so I will not go into that.

But like part A families, those who live and work on Federal property, many part B families do not pay property tax. The Soldiers' and Sailors Relief Act compounds the problem by allowing military personnel to pay personal property taxes on cars, boats, motor homes, and so forth to their home State.

Other part B parents work on Federal property, which of course is not subject to business taxes. Even private industry located on Federal land cannot be taxed if the military has exercised the right of exclusive jurisdiction. As you can see, the children do affect the tax base of the local school districts and, therefore, should be included in the Impact Aid Program.

I fervently request that the part B funding not be eliminated, as some have suggested. It is every bit as necessary as part A funding.

In closing, Mr. Chairman, the Impact Aid Program is authorized at $800 million. Last year it received $717.5 million. I urgently request that impact aid receive its full authorization of $800 million for fiscal year 1988, providing basic education for children of our military people.

Uncle Sam is the one that requires these people to move around and live in nontaxable housing. How can we not reimburse local school districts for the expenses they incur at our request?

PREPARED STATEMENT

Thank you, Mr. Chairman and members of the committee. And I would be happy to answer any questions, and ask that the full text of my statement be printed in the record.

Senator Chiles. Your full statement will be printed in the record as set forth, and I thank you for your statement.

[The statement follows:]

STATEMENT OF SENATOR J. JAMES EXON

Chairman Chiles and members of the Labor-HHS Appropriations Subcommittee, I appreciate the opportunity to present testimony on behalf of the Impact Aid Program for fiscal year 1988. I understand that you have quite a list of people and organizations also wishing to testify, so I will make my remarks as brief as possible.

I cannot impress upon you enough the importance of the Impact Aid Program; not only to the 16 school districts in my State of Nebraska that receive funds, but also to the other 2,650 school districts across the Nation that rely on these funds for basic operations and maintenance.

Impact aid is frequently discussed in the same light of Federal assistance as are supplemental programs. This is due to a basic lack of understanding of the original intent of the program. Impact aid is not one of the supplemental programs. It is a Federal obligation, a reimbursement to local school districts for services rendered. Impact aid revenue is intended to provide the basic operation and maintenance money needed to house, transport, and educate federally connected children whose parents (for one reason or another) do not contribute their fair share of support through the taxation processes. This happens because of the nontaxable status of Federal property, Federal activities, and some Federal employees.

Impact aid is the Federal Government's attempt to compensate for lost revenue where Federal ownership or Federal activity adversely interferes with any or all of the common, local resources normally used to finance public education.

In addition to the district's inability to generate revenue from federally owned property, other tax reducing burdens are present. For example, cars and mobile homes in many districts are considered personal property and cannot be taxed under the Soldiers' and Sailors Relief Act.

The concept behind impact aid was first recognized in 1950 when the Federal Government realized the severe adverse impact it had on public school districts by the end of World War II. The sudden and disproportionate infusion of youngsters into the public schools near Federal installations was devastating. With more children and less revenue, it suddenly became the responsibility of those citizens in the neighborhood to pay significantly higher taxes to subsidize the children generated by these Federal properties; to subsidize unfairly and disproportionately an obligation which should be shared by the entire Nation. It became blatantly obvious that some type of assistance was needed to pay for local services rendered to those children who are a national responsibility. This now includes not only military dependents, but children being educated on Indian land and children from federally owned, nontaxable low rent housing units as well.

Mr. Chairman, as I am sure you are aware, part B of the Impact Aid Program has been under fire for many years, and this year is no exception. A part B student is defined as: (1) one who resides on Federal property, but whose parent does not work on Federal property; (2) a student whose parent works on Federal property, but who does not live on Federal property; or (3) a student whose parent is on active duty in the uniformed services of the United States. Part B funding has been justified by every major report done on the Impact Aid Program.

Like part A families—those who live and work on Federal property—many part B families do not pay property tax. The Soldiers' and Sailors Relief Act compounds the problem by allowing military personnel to pay personal property taxes on cars, boats, motorhomes, et cetera to their home State. Other part B parents work on Federal property which, of course, is not subject to business taxes. Even private industry located on Federal land cannot be taxed if the military has exercised the right of exclusive jurisdiction.

As you can see, these children do affect the tax base of the local school districts, and, therefore, should be included in the Impact Aid Program. I fervently request that the part B funding not be eliminated. It is every bit as necessary as part A funding.

Mr. Chairman, the Impact Aid Program is authorized at $800 million. Last year it received $717.5 million. I urgently request that impact aid receive its full authorization of $800 million for fiscal year 1988. We owe that much to the local districts who provide basic education to the children of our military people. Uncle Sam is the one that requires these people to move around, and live in nontaxable housing. How can we not reimburse local school districts for the expenses they incur at our request?

Thank you, Mr. Chairman, members of the committee. I'd be happy to answer any questions you may have.

Senator CHILES. Impact aid is something we all wrestle with, and we certainly have part B students in my State. It is difficult, as you know so well because of the work you have done on the Budget Committee, realizing how it is very difficult for us to put together all these priorities.

And you can talk about additional money. I think our fight is going to be to try to keep part B from being destroyed entirely.

Senator EXON. I think you are right, Mr. Chairman. I would simply say that I have suggested that some time or another—and when I suggest this, it usually brings a lot of support for the part B students—but probably this should be considered as part of our military budget, rather than a part of our education budget from time to time, because it is a military obligation.

And if we are going to try and hold harmless any decrease, any real decrease in military funds, which I think is basically the position of the majority of the U.S. Senate, then I think it only follows that, since it is military connected, there should not be a decrease in the funding, it should be held harmless.

Senator CHILES. If you take that up with Senator Nunn and he would consent with that, I might allow it. [Laughter.]

Senator EXON. I am not sure that Senator Nunn would agree to that, but I think it might bring him on board more than he is now, although I do not know how he feels about part B. It is a means to pick up support by using the old threat method.

Thank you, Mr. Chairman.

Senator CHILES. Thank you, Senator.

Senator DASCHLE.

STATEMENT OF HON. THOMAS A. DASCHLE, U.S. SENATOR FROM SOUTH DAKOTA

Senator DASCHLE. Thank you, Mr. Chairman. We appreciate your allowing us to come. I am amazed you have the time, given your responsibilities on the floor the rest of the week.

But I would certainly support Senator Exon's recommendation. In fact, I think at this point I am willing to put the entire Federal budget in defense and sort it out in priorities within defense.

But let me just say with regard to impact aid, in South Dakota and Nebraska and some of the upper Midwestern States in particular it is probably more critical now than it has been in recent years. The impact that the agricultural economy has had on our communities and on our schools has just been devastating.

Foreclosures are up so far this year by more than 40 percent. And while we are as dependent as we are in some cases, schools are dependent by 50 percent, and in a few cases in South Dakota by 66 percent, two-thirds of all of our funding comes from impact aid, given the threat now that we see to part B and to a certain extent to part A, we are even imperiled greater than we normally would be.

So as we consider all of the different——

Senator CHILES. What part of your education funding is coming from impact aid?

Senator DASCHLE. Well, two-thirds of the budget that some of my schools now utilize comes directly from impact aid in western South Dakota. In some cases it is only 50 percent. But the ramifications of cuts of this kind in the economic climate agriculturally is just devastating for these schools.

Senator CHILES. What kind of Federal land is that?

Senator DASCHLE. Well, it is BIA land and it is, to a large extent it is our Air Force base, the Air Force land, plus you have got Forest Service land and BLM land. You have got every conceivable kind of ownership of property out there.

But I would say the two most significant are the Air Force base and the BIA. But under those circumstances in particular, the two problems that undermine our ability to function are first the lack of certainty—there is a tremendous lack of certainty on an annual basis about what that budget is going to be—and then second, beyond lack of certainty, the lack of available funding.

And so for both reasons, the certainty that would come about with an $800 million appropriation plus the funding under these extreme economic circumstances, really lend themselves to the strongest argument possible that this appropriation ought to be provided.

In addition, as I know the chairman knows, there is a $50 million construction appropriation, and that too would be very helpful to those of us in western South Dakota.

And so I guess the bottom line for us, Mr. Chairman, is that $800 million plus the $50 million would give us the continuity, would give us the expectation of adequate funding under difficult circumstances, and it would be a big boost to western South Dakota, and I am sure the upper Midwest.

PREPARED STATEMENT

Senator CHILES. Well, we thank you and we will certainly try to consider these things as we put together all of the pieces of the budget. And we appreciate both of you taking the time.

Senator EXON. Thank you, Mr. Chairman. We appreciate it.

Senator DASCHLE. Thank you.

[The statement follows:]

STATEMENT OF SENATOR TOM DASCHLE

Mr. Chairman, I appreciate your giving me the opportunity to testify today on behalf of the South Dakota impact aid districts. Impact aid plays an essential role in the education of the children of South Dakota, and I want to assist your committee in any way possible as you attempt to strengthen this important Federal program.

As someone who represents a State with a significant Federal presence due to both extensive Indian lands and a major SAC installation, I feel I am able to offer a unique perspective on the Federal Impact Aid Program. I think the facts will show that impact aid has been funded inadequately and that the fiscal year 1988 Impact Aid Program should be funded at the full authorization level of $800 million.

Students educated in South Dakota schools enjoy the opportunity to receive quality education which, as measured by standardized test scores, places them near the top of all students in our Nation. The support for this quality education in many South Dakota districts comes from funding provided under Public Law 81-874.

As you know, South Dakota depends heavily on impact aid funds as it struggles to meet the basic educational needs of its Indian and military children. Several of the large Indian-impacted districts and the Douglas School District, which educates children affiliated with Ellsworth Air Force Base, rely on impact aid for over 50 percent of their operating budgets. When vital funds are delayed, cut, or prorated, the term "inadequate funding" takes on a special meaning for these heavily impacted schools. In some districts, it would be accurate to say that the educational program simply would not exist without impact aid funds.

The President has again recommended the elimination of impact aid payments for category "B" students on an fiscal year 1987 level freeze on payments for category "A" students. This proposal comes at the heels of a 6-year decline in impact aid funding and, if ever implemented, would devastate many of our Nation's schools.

Your committee is currently considering the question of an appropriaton for Public Law 81-874 and must certainly be concerned with the costs and benefits of the Impact Aid Program. I am pleased to report that in South Dakota, impact aid dollars are expended in a manner which is efficient and cost effective and which provides measurable educational results.

I would like to take a few moments to describe the actual role of impact aid in South Dakota schools, first considering the Indian districts, and then outlining the current situation at the Douglas School District.

Without funding under this program, educational opportunity would be severely limited or would cease to exist for most of the native American population of our State. The law addresses the need to provide funding for children who reside on Indian lands, and Congress has the responsibility to ensure that the funding is adequate and does, in fact, offer educational opportunity to Indian children.

Most of the South Dakota school districts that educate Indian children find themselves in the unique position of having most of their eggs in one basket in that they rely so heavily upon impact aid funding. Impact aid is the mainstay of their budgets and ultimately determines the quality of every aspect of their school programs. In some cases, Indian-impacted districts rely upon impact aid for two-thirds of their budgets. It would be accurate to say that unlike any categorical program, impact aid provides Indian education.

It is also important to note that, by virtue of the definition of the term "Indian lands," districts educating Indian students have little or no local property generating a tax base for the educational programs. Therefore, such district must rely completely upon the funding provided under the Impact Aid Program.

Similarly, the Douglas School District, which serves Ellsworth Air Force Base, depends heavily on impact aid. In fact, the school has had to close its doors on one occasion and has had to suspend teacher contracts on another. Due to the particularly low tax base in the surrounding community, Douglas relies in large part on section 3(d)(2)(B) funds, those authorized to compensate for funding shortfalls that remain after sections 2 and 3 funds have been calculated.

I can assure you that Douglas is one of those districts that could not survive without Federal assistance. The Impact Aid Program was designed to meet the needs of the children affiliated with military installations, but appropriations have not kept pace with increased program costs, and entitlements have been prorated. Douglas, which relies on funding for both category "A" and category "B" students, remains at great financial risk until adequate impact aid funds are restored.

At this point, it is important to remember that impact aid was designed to ensure that federally connected children receive a basic public education. When Congress cuts these funds, we are not cutting waste, we are cutting basic education programs and undermining our national commitment to provide basic free public education to all children. In addition, we are forcing school officials to divide their time between educating children and chasing down Federal dollars.

We all know that obtaining adequate impact aid funds has been a constant struggle for many school districts who fulfill the Federal obligation of providing education to federally connected students. The Impact Aid Program has taken deep cuts since 1981. In South Dakota alone, impact aid districts have lost $42 million over the last 6 years. It is time to get our priorities back in order and stop this erosion of our Indian and military children's education. The way to do that is to provide full funding of the Impact Aid Program as authorized under Public Law 81-874.

Your committee plays a crucial role in supporting the educational program that provides the basis for the education of all Indian and military children in our State. I would urge you to contiinue that support for all federally connected students, whether they be "super A," "regular A," or "B" students. Specifically, I would urge you to appropriate the full authorization level of $800 million for Public Law 81-874. Only then will we be able to get on with the business of educating our children. I genuinely believe this is the fair thing to do and that it will bring about a positive, dramatic effect on our children's future.

Finally, Mr. Chairman, I want to mention the importance of school construction funding as authorized under Public Law 81-815. While these funds often get overlooked during the annual impact aid debate, the construction needs of federally impacted school districts are very real. I, therefore, request that the Public Law 81-815 program funding be increased to a level that will provide a practical response to those construction needs. That level should be at least $50 million if our schools are to receive any relief under this program.

On behalf of the 23 impact aid districts and the thousands of federally connected children in South Dakota, I want to thank you for your continued interest in the Impact Aid Program.

STATEMENT OF LYNNE CANNON, PRESIDENT, ASSOCIATION FOR CHILDREN AND ADULTS WITH LEARNING DISABILITIES, INC.

Senator CHILES. Our next witness will be Lynne Cannon, president of ACLD, Inc.

Ms. CANNON. I have brought copies of my testimony for members of the subcommittee if they would like.

Mr. Chairman, I am Lynne Cannon of Iowa City, IA. I am currently serving as the national president of ACLD. ACLD is the Association for Children and Adults With Learning Disabilities.

And I appreciate the opportunity to appear before you and your committee on behalf of the 60,000 families in this country with children or adults with learning disabilities who are members of ACLD. I want to note first the strong support the chairman, the ranking members, and other members of the committee have provided to all people with handicaps over the years.

With your support, Federal financial assistance is finally beginning to move toward the level promised with the passage of Public Law 94–142. My message today will be short and straightforward. We realize that you must make very difficult decisions within severe budget constraints.

Every health, education, and human service program is under close scrutiny. The President's budget proposes to rescind close to $300 million in special education funding for handicapped students and to reduce next year's funding by an equal amount.

The administration proposes to rescind $125 million in rehabilitation services and to reduce next year's funding for these services by an additional $90 million. In addition, this proposed budget would rescind $430 million in vocational education funding and would eliminate Federal support for vocational education next year.

Mr. Chairman, in each of these programs cited State spending far outweighs Federal spending, but the Federal Government establishes the importance of the program and sets the direction for States through incentive funding, through matching funding, and through mandates.

If we reduce our spending now, restrict or eliminate priority intervention programs, remedial programs, targeted programs, or incentive programs, it will cost the taxpayers much, much more in the future in social welfare spending. Persons with learning disabilities will not have had the opportunity that these programs offer to develop and grow and to be contributing members of our society.

I know this as a mother of two learning-disabled children, as a school board member of a local school district, as well as an intermediate agency board member, and from working with ACLD members and State and local affiliates.

I would point in particular to the newly authorized special education early intervention program, which the administration proposes to eliminate. As both a parent and a school board member, I can say that, although programs to educate and serve persons with learning disabilities have improved immeasurably over the last 10 years, we are finally beginning to take the needed action to help prevent or limit the effects of learning disabilities through these current programs.

If we end these initiatives and if we do not spend money on research into the causes of learning disabilities, the population with specific learning disabilities may grow considerably. It will then not be possible to control the cost and, most important, our children will suffer greatly.

Therefore, as you make your decisions I am certain you will consider the importance of the long-range effects of current spending on people's lives, particularly those people with learning disabilities, and on future public costs. When spending is remedial or preventative, I believe it makes good fiscal sense to increase that spending, even if it results in constraining increased spending elsewhere in the Federal budget.

PREPARED STATEMENT

Thank you very much for your continued support and for the opportunity to testify on behalf of the 60,000 members of the Association for Children and Adults with Learning Disabilities.

Senator CHILES. Thank you, Ms. Cannon.

[The statement follows:]

STATEMENT OF LYNNE CANNON

I am Lynne Cannon of Iowa City, IA, and am currently the national president of ACLD, Inc., an Association for Children and Adults With Learning Disabilities. I appreciate the opportunity to appear before your committee on behalf of the 60,000 families in this country with children or adults with learning disabilities who are members of ACLD, Inc.

I want to first note the strong support of the chairman, ranking member, and other members of this committee have provided to all people with handicaps over the years. With your support, Federal financial assistance is finally beginning to move toward the level promised with the passage of Public Law 94-142.

My message today is simple and straightforward. We realize you must make difficult decisions within severe budget constraints. Every health, education, and human service program is under close scrutiny. The President's budget proposes to rescind close to $300 million in special education funding for handicapped students and to reduce next year's funding by an equal amount. The administration proposes to rescind $125 million in rehabilitation services and to reduce next year's funding for these services by $90 million. In addition this proposed budget would rescind $430 million in vocational education funding and would eliminate Federal support for vocational education next year.

Mr. Chairman, in each of these programs cited, State spending far outweighs Federal spending, but the Federal Government establishes the importance of the programs and sets the direction for States through incentive funding, matching funding, and mandates. If we reduce our spending now, restrict or eliminate priority intervention programs, remedial programs, targeted programs, or incentive programs, it will cost the taxpayers much, much more in future social welfare spending. Persons with learning disabilities will not have had the opportunity these programs offer to develop and grow and to be contributing members of our society. I know this as a mother, as a school board member of a local school district as well as an intermediate agency and from working with ACLD, Inc., members and State and local affiliates.

I would point in particular to the newly authorized special education early intervention programs which the administration proposes to eliminate. As both a parent and a school board member, I can say that although programs to educate and serve persons with learning disabilities have improved immeasurably over the last 10 years, we are finally beginning to take the needed action to help prevent or limit the effects of learning disabilities through current programs. If we end these initiatives and if we do not spend money on research into the causes of specific learning disabilities, the population with learning disabilities may grow considerably. It will then not be possible to control the cost, and most important our children will suffer greatly.

Therefore, as you make your decisions, I am certain you will consider the importance of the long-term effects of current spending on people's lives, particularly those people with learning disabilities, and on future public costs. When spending is remedial or preventative, I believe it makes good fiscal sense to increase that spending even if it results in constraining increased spending elsewhere in the Federal budget.

Thank you for your continued support and for the opportunity to testify on behalf of the members of the Association for Children and Adults With Learning Disabilities.

STATEMENT OF PAT TORNELLO, ON BEHALF OF THE AMERICAN FEDERATION OF TEACHERS

Senator CHILES. Our next witness will be Mr. Pat Tornello of the American Federation of Teachers.

Mr. TORNELLO. Mr. Chairman——

Senator CHILES. I used to have a young fellow named Pat Tornello testify before me at the Florida Legislature, and he was a very young man. It might have been your son.

Mr. TORNELLO. No; I have gotten the grey hair over the years. [Laughter.]

Mr. Chairman, you have a copy of our statement.

Senator CHILES. I do, and your statement in full will be printed in the record, and I hope you will be able to abbreviate it.

Mr. TORNELLO. I would like to spend these few minutes—it is nice to see you again so soon after this past weekend, when we had the entire Florida congressional delegation in Miami. Many of the things in the statement you heard personally.

You were there, and our education presentation on the SS *Norway*, and we had a great weekend. And with all the other things, education obviously was one of the major agendas that all the Congressmen and you and Senator Graham heard.

And I just would like to take this opportunity to thank you for sponsoring your dropout bill, and I am not sure that many people are aware of it, but you personally saw some of the programs in Miami and you certainly know about some of the others in the State of Florida. And you have introduced the Drop-Out Retention and Recovery Act, and I want you to know that we strongly support that.

With regard to early childhood education, you personally saw what we are doing at Larchmont Gardens in some of the housing projects for students at risk in early intervention programs.

I know that I do not have to tell you about the needs. You are well aware of them. You are aware of them personally in Florida and across the Nation, and I know that you will do whatever you can.

We simply cannot continue to have the cutbacks that the Reagan administration is proposing.

Senator CHILES. Well, I certainly agree with that. And I waited until you came up here, rather than say it when Mrs. Cannon was here. But the same thing is true. We are not going to allow the President to not fund vocational, to terminate vocational education or early intervention programs, or the other learning disabled and handicapped programs.

We wish we would be in a position to do an awful lot more in some of those areas. That is one of the reasons, of course, we have to get on top of the budget, because until we do we cannot set priorities. And these items are priorities for most of us in the Congress, and I think you know that.

And as a matter of fact, this is not the first time the President has proposed these cuts. Every budget cycle we see it, and they alarm people, but we do not allow it to happen. But we have not been able to see many of these programs grow the way we would like, and we will have to get on top of the budget before we can do that.

And I say there are two reasons for fixing the deficit. One is a purely economic reason. If we do not, our economy is going to go into a recession and then we will not be able to do anything.

But the second reason is to allow us to get about setting the priorities where we ought to be placing our time and our effort and our resources for this Nation, and certainly it is trying to take care of these children at risk, for two reasons again.

The main reason for one—but the second, again if you are a fiscal conservative, and I consider myself one, it is a hell of a lot easier to save money by doing it early on in these programs, so that these people can have meaningful lives and do something for themselves, as opposed to ending up being wards of the State and perhaps incarcerated or hospitalized or some other way that we have to take care of them.

PREPARED STATEMENT

Mr. TORNELLO. Mr. Chairman, in conclusion, I do not have to tell you that we recognize how difficult the job is that you have, and with the deficit and the budget. And I would just remind you that there are times when we have to transcend that, because we could be saving some future deficits by some money that we are talking about that is needed.

Senator CHILES. Thank you very much. We are delighted to have you here.

[The statement follows:]

STATEMENT OF PAT TORNELLO

Mr. Chairman and Members of the Subcommittee, on behalf of the American Federation of Teachers, I would like to express our appreciation for this opportunity to testify on education appropriations for FY 1988. I would also like to express our gratitude for the committee's continuing effort to adequately fund Federal education programs in these fiscally difficult times.

At the outset I must state the AFT's strong opposition to proposals by the Reagan Administration to severely diminish the Federal role in education. In particular, I must speak against the proposed cuts in Vocational Education, Impact Aid Payments, the Christa McAuliffe Fellowships, and General Assistance to the Virgin Islands. The Administration's plan to cut Federal education funding by 20 percent, which would eliminate or render inoperable many valuable programs, is unconscionable in view of the enormous need that exists. Rather, the effort must be made to regain the ground lost in real dollars in the early 1980s and to make the educational investments necessary for an internationally competitive economy and a fully productive citizenry.

The United States must take action with respect to its relative loss of economic productivity and the loss of its former preeminance in international trade. Virtually all who study and speak to these issues recognize the central role education must play in reversing the downward trends. This calls for a greater investment for the future, not a slashing of Federal education programs. The AFT believes it also calls for investment principally in the established and demonstrably effective education programs which are the mainstays of the present Federal effort. Programs such as Chapter One and Pell Grants serve the least advantaged members of the future work force.

To begin with, the AFT believes Congress must support full inflation adjustments for all currently funded education programs. We understand this would cost 600 million dollars above FY 1987 appropriations. Education is not only the principal engine of economic progress, and the primary means of individual social mobility, but is arguably the best investment a society can make. The American public has consistently expressed the belief that it is a national priority of the highest order. The Federal Government must also maintain its commitment to existing programs in order to support the important national movement for educational reform. Congress must maintain the momentum of last year's action on appropriations in regaining some of the ground lost after 1980. In accord with what we believe is the sense of the Congress, the AFT also recommends substantial but reasonable increases beyond inflation in a number of education funding areas.

Chapter One, E.C.I.A., provides services to students who can most benefit from the additional education and who otherwise may be among the weakest members of the future economy. Federally funded studies show clearly that Chapter One students do significantly better in school and that the program has raised test scores and reduced the gap between white and black students. It is effectively targeted on needy students and the funds are used appropriately to supplement local district programs. However, there is need for increased funding to serve additional students who are eligible for services and to extend services to earlier age groups and to students at the secondary level. Educators believe that expanding the range of grade levels covered, within present or future authorization language, would greatly enhance the program's effectiveness. The AFT recommends an increase in Chapter One funding of 500 million dollars above an adjustment for inflation.

Education of the handicapped is another funding area which calls out for significant improvement above an inflation adjustment. Although the Federal share has shown considerable gain from the low of 7 percent of National Average Per Pupil Expenditures in the early 1980s, it is still a fraction of the Federal commitment of 40 percent of excess costs. Underfunding of the Federal role undercuts adequate services to handicapped children and shifts the costs to other students. The AFT believes Congress must continue to increase the Federal share of costs and must make significant progress toward realizing the full Federal commitment. AFT recommends an increase in funding for Education of the Handicapped 500 million dollars above an adjustment for inflation.

School dropouts are a serious national problem. In addition to personal misfortune, they represent a loss of economic productivity and other social costs. Federal efforts to alleviate the dropout problem, and thereby increase school enrollment, have an added benefit of leveraging extra state and local funds for education. In lieu of authorizing legislation for a national dropout prevention program, the AFT recommends an additional 100 million dollar appropriation for the Chapter One program, specifically earmarked for the secondary school level.

At the Higher Education level, AFT recommends an appropriation for Pell Grants 600 million dollars over "current services," or a total of 800 million dollars over the FY 1987 appropriation. This amount, we understand, will fund a maximum grant of 2300 dollars. Both the success and the need for the program warrant such an increase. Also, Pell Grants serve those students who can gain the most from education and who can thereby most improve their contribution to the nation's economy.

Within Title V of the new Higher Education Act, AFT specifically recommends appropriations of 20 million dollars for Congressional Teacher Scholarships, 3 million dollars for the Christa McAuliffe Fellowship Program, 15 million dollars for Professional Development Resource Centers, and 15 million dollars for Leadership in Educational Administration. Each of these programs offers a distinctive and important contribution to improving the quality of education. Recruiting the best high school students to become teachers, providing outstanding teachers the opportunity to undertake special activities, and establishing centers for professional development of teachers or administrators will each greatly benefit education.

Finally, the AFT would like to recommend funding at the Administration's requested level for the Office of Educational Research and Improvement. This increase will allow necessary improvements and continuity in Federal research and statistics programs. These are programs through which the Federal Government can make a vital contribution to the quality of education.

In conclusion, I would like to again thank the Subcommittee for this opportunity to present the views of the American Federation of Teachers. We at the AFT wish to continue working with the committee and the Congress to strengthen American education and to enhance its contribution to the nation's welfare. I will be happy to respond to any questions.

STATEMENT OF KENNETH F. MELLEY, DIRECTOR, GOVERNMENT RELATIONS, NATIONAL EDUCATION ASSOCIATION

Senator CHILES. Now, Mr. Kenneth Melley of the National Education Association.

Mr. MELLEY. Good afternoon, Mr. Chairman. It is good to see you.

My name is Kenneth Melley, the director of government relations for the National Education Association. I come before you today with a very simple message: Education is not simply one among our national priorities; it is woven into the fabric of all of our priorities.

Continued leadership among nations and the future as the bastion of liberty, justice, and equality—it is essential that we invest in our Nation's future by providing sufficient funding for Federal education.

I was delighted to hear your remarks to the previous speaker, and we are urging that you reject the President's budget, which would cut $5.5 billion out of current spending.

Senator CHILES. We intend to.

Mr. MELLEY. That is a major message that we are delighted to hear today.

Second of all, we would like to ensure that the appropriations process guarantee at least the current services and growth from that point of view. And you have said so much in your statement here to the previous speaker that is in my statement that I think I will conclude there. And we appreciate what you are doing.

Senator CHILES. Well, we thank you, and we thank you for the support that NEA gives and AFT gives to all of our programs. They are very helpful.

PREPARED STATEMENT

Mr. MELLEY. I have submitted my full testimony.

Senator CHILES. Your statement in full will be included in the record.

Mr. MELLEY. Thank you, Senator.

[The statement follows:]

STATEMENT OF KENNETH F. MELLEY

I am Kenneth F. Melley, director of Government Relations of the 1.8 million-member National Education Association. I appreciate the opportunity to speak with you today about the pressing need for federal assistance to public education.

This Subcommittee is now engaged in the difficult process of setting priorities among essential federal programs. The decisions this Subcommittee and this Congress will make about federal spending in fiscal year 1988 will have implications far into the future. Nothing is more important to our nation's future than education. Therefore we urge your active leadership in the effort to restore education to its rightful place as a central component in a strategy to ensure our nation's future security and vitality.

Public opinion strongly supports this strategy. According to a recent Gallup Poll, nine out of 10 Americans believe that developing the world's best education system is the most effective way to strengthen our nation's future, more important than building the largest military complex or developing the most efficient industrial production system.

With such a clear mandate, it would seem to go without saying that our education institutions deserve the resources necessary to build an education system without parallel.

We urge this Subcommittee to support spending levels that the will of the American people and fully meets the needs of America's public school students. Education is not simply one among our national priorities. It is woven into the very fabric of all of our priorities. If America is to continue its leadership among nations, it will require the skills, knowledge, and creativity of our nation's people — skills, knowledge, and creativity that can be acquired, developed, and nurtured only in our nation's schools. If America is to continue its traditions of liberty, justice, and equality, we must ensure opportunity and excellence in education.

We have made great strides in recent years. Thanks to the strong support of this Subcommittee, federal education programs have been provided resources to ensure educational opportunity for millions of students. It is essential that Congress sustain that effort to serve special student populations and provide resources to enable students of all ages to fully meet their potential. Yes, continuity is important to the success of educational programs. But more, importantly, continuity is an essential component of the learning process itself.

To maintain that continuity, existing federal education programs must be protected from any further cuts, including the adverse impact of inflation.

Yet, as a nation, we still fall short of fully meeting our responsibilities to our successor generation. Far too many of America's children are trapped by limited opportunities because of circumstances beyond their control.

Today more than one-fifth of all American youngsters are poor — an increase of 33 percent since 1979. Almost 40 percent of all Hispanic youth live in poverty, as do more than half of all Black children. At least one-tenth of all children in our schools have parents who are poorly educated. Millions lack proficiency in English. And hundreds of thousands of these children are the offspring of teenage parents who can offer their children little or no guidance or discipline.

Our nation has seen alarming rates of drug abuse and suicide, and a devastating dropout problem. Today, 30 percent of all students leave school before they complete their education. In some cities, the dropout rate among Blacks is estimated to be about 50 percent, and shockingly, 70 to 80 percent of all Hispanic youngsters leave school before graduating. This is not a problem confined to some urban ghetto or barrio. Half of all students in the state of Louisiana do not finish school.

Too many children must attend school with their energy sapped and their development stunted by the effects of hunger, illness, or high rates of stress. Moreover, the number of at-risk students is increasing dramatically — students living in poverty, students whose parents do not speak or read the English language, students from single-parent homes, students whose parents are themselves children, students whose parents are illiterate. Students at risk are estimated to be at least 30 percent of all school-aged children today and are projected to be the majority of our school-aged population by the turn of the century.

Without quality education programs designed to meet their needs, these youngsters will be consigned to lives of poverty, hopelessness, and despair. We cannot allow that to happen.

Communities throughout the country have made great sacrifices to provide adequate resources — money, people, and time — in order to build a system of quality public education. In recent years, state governments in particular have devoted themselves to making real progress in public education. Currently, 42 states spend more than one-third of their entire budgets on public education. In the past three years, some 14 states have increased taxes, in part or expressly for the purpose of providing needed increases in funding for public education.

We agree that improving education depends to a large extent on a renewed commitment from individual students, families, educators, and communities. NEA, its members and affiliates, will continue our efforts to set high standards for education employees and students, to provide quality programs, and to encourage cooperative efforts with schools, parents, and communities. This commitment must be matched with resources.

State and local governments alone cannot meet the needs of today's students. Constitutional or statutory restraints on revenue and spending have hamstrung many state and local officials responsible for public education. Slow economic growth, high unemployment, setbacks in states whose economies are grounded in agriculture, energy, and manufacturing continue to hamper education reform efforts in many parts of the country.

The U.S. Department of Education projects that state and local governments will provide an additional $14 billion to improve educational programs. But what Americans would give with one hand, the Reagan Administration would take away with the other.

The Administration's spending recommendations for programs administered by the U.S. Department of Education, if accepted by Congress, would bring about a total reduction of some $5.5 billion, a 28 percent reduction compared to the FY87 funding level of $19.5 billion. This Administration projects cutting Department of Education spending to $12.5 billion by 1992.

The Administration's proposed education spending plan is anti-children, anti-minority, and anti-disadvantaged. It is anti-growth, anti-development, and anti-security. It would impede our nation's continuing struggle for liberty, justice, and equality. These proposals must be rejected.

Despite the commitment of Congress to education, the previous six years showed steady erosion in all areas of federal support for public education. Just to maintain the level of services provided in the 1980-81 school year would cost almost $23 billion in 1988-89. To serve all the eligible disadvantaged, low achievement students that the Chapter 1 program was intended to serve would require an increase of about $4.8 billion. To achieve the level of federal assistance intended by the authors of the Education of All Handicapped Act would require an increase of about $8 billion.

Instead, during the past six years, Administration efforts, budget constraints, and inflation have chipped away at the ability of federal education programs to meet the needs of America's students.

The Chapter 1 program has lost in purchasing power some $1.2 billion. As a result, more than one million fewer disadvantaged students were served in compensatory education programs in 1985-86 than in 1980-81.

The Chapter 2 block grants have lost in purchasing power some $750 million. Thousands of jobs have been eliminated and hundreds of programs wiped out nationwide compared to Chapter 2's antecedent programs.

Programs under the Bilingual Education Act have lost some $130 million in purchasing power. As a result, 130,000 fewer students with limited proficiency in English are served in 1985-86 than were in 1980-81. Bilingual education programs with federal assistance serve only about 20 percent of all eligible students.

Vocational education programs have lost some $400 million in purchasing power. As a result, job training opportunities for the 20 million youth and adults enrolled in vocational education programs have been greatly diminished.

The cumulative effect of reductions in postsecondary counseling programs for disadvantaged students, reductions in the purchasing power of postsecondary student aid grants, increases in tuition, and other economic and social forces has resulted in a stark decline in the number of minority students entering postsecondary institutions. In the last decade, the percentage of Black and Hispanic students enrolling in college has dropped by about one-third, while enrollment has remained virtually unchanged for white high school graduates. In addition, student loans now make up one-half of the average financial aid package compared to 17 percent a decade ago.

These are some examples of how educational opportunities lost from a a reduction in federal resources for education are borne disproportionately by minorities and the poor.

Congress must restore some of the educational services lost in need-based education programs over the past six years. Holding the line or adding back small amounts is not sufficient to build for the future. The sooner we take significant steps toward serving all students at risk, the less drastic the need for later, expensive remedial programs will be.

If there is an answer to our nation's needs — and we believe there is — education is a vital component. If improving education is a national priority — and we believe it ought to be — the federal government ought to play an active role in leadership, guidance, and support.

Where We Should Go

Mr. Chairman, the actions of this Subcommittee and of this Congress will determine the future direction of our nation. Will we reverse the progress you and others worked so hard to achieve in making human resources a national priority, or will we build on that foundation?

Despite the increases provided for FY87, there are still many at risk students who are not being served, especially in the areas of Chapter 1 and bilingual education. At the same time, the federal share of support for handicapped education has fallen from around 12 percent in FY80 to around seven percent in FY87. The education of disadvantaged, handicapped, and special needs students is a moral and economic imperative. Congress must ensure that appropriate special educational services be made available to all students who need them.

Improving educational standards at every level is a stated priority of the American people. We therefore recommend full funding for programs to enhance the development of quality curriculum and materials, training and staff development for education employees, and programs to assist in the full integration of our schools and our society. Research programs vital to the improvement of instructional methods and materials and critical to the development of educational policy at the federal, state, and local level must be extended and enhanced.

Congress must provide guidance and resources to develop and maintain programs to address adult illiteracy, school dropout prevention, chemical dependency, teenage pregnancy, and other socioeducational problems.

In the area of vocational education, we urge Congress to reject the false premise that the federal government plays an insignificant role in the delivery of quality training in job skills. Federal vocational education assistance is a vital component of local and state efforts to provide needed job skills to disadvantaged students. Without federal aid to vocational education, too many vocational programs would be forced to train the workers of tomorrow using the technology of yesterday.

Federal postsecondary aid, both student assistance and institutional aid, has played a major role in the progress of our nation. If our nation is to remain competitive in the international community and remain secure in a time of international instability, we must have citizens with the skills, the imagination, and the creativity to find solutions, make discoveries, and develop new technologies.

College graduates contribute, not only to our national coffers through taxes on the higher salaries they can command, but to our national greatness. To continue our national development and progress, it is essential that Congress maintain the number of students served in existing student grant and loan programs.

The assistance to traditionally Black postsecondary colleges and universities and other postsecondary institutional aid is vital to the development of our nation's intellectual capital.

Federal assistance to other educational insitutions, including public libraries, museums, and the Corporation for Public Broadcasting, must be supported for the sake of building a nation of readers and a nation committed to lifelong learning.

Students who suffer from abuse, neglect, hunger, or poor health care, or who are caught up in chemical abuse, promiscuity, or anti-social behavior, present an educational, as well as a social, challenge to our nation. Federal support for programs that address the human needs of children and families are vital to continued progress in education.

Senate committees are progressing apace in the extension and expansion of many of the most important federal education programs, including Chapter 1, Chapter 2, Bilingual Education, and others. We urge the Subcommittee to appropriate funds necessary to ensure the success of new programs authorized by the Congress, as well as to maintain existing programs. Without resources to fully meet the needs of our nation's schoolchildren, these programs will become an empty promise to American children and youth.

We urge your support for resources to add back educational services to students lost in recent years, as well as additional resources to develop programs which provide individuals of all ages the skills necessary to be successful, productive members of our democratic and social institutions.

Conclusion

Extending full educational opportunity to all our citizens is not an ideal we can set aside to accomplish in better times. America's children cannot wait until state and local governments are all equally able to provide quality education. America's children cannot wait for the federal government to have a balanced budget or a surplus to see their educational needs met.

We urge this Subcommittee to reject the President's education spending recommendations, safeguard education from any further cuts, and assure that need-based education programs have sufficient funds to extend appropriate educational services to all students who need them.

As long as our children are at risk, our nation is at risk. If we have hopes of succeeding in the future, we must invest in education today.

STATEMENT OF JAMES R. SNYDER, NATIONAL LEGISLATIVE DIRECTOR, RAILWAY LABOR EXECUTIVES' ASSOCIATION

ACCOMPANIED BY:

R.T. BATES, CHAIRMAN, RAILWAY LABOR EXECUTIVES' ASSOCIATION, COMMITTEE ON RAILROAD RETIREMENT

E.P. McENTEE, ON BEHALF OF THE RAILWAY LABOR EXECUTIVES' ASSOCIATION, COMMITTEE ON THE RAILWAY LABOR ACT

PREPARED STATEMENTS

Senator CHILES. We are going to call now, just a little out of order, Mr. Jim Snyder to testify as the national legislative director of the Railroad Labor Executives' Association.

Mr. SNYDER. Mr. Chairman, I have two or three fine gentlemen here. We will comply with your request——

Senator CHILES. Would you introduce them for me?

Mr. SNYDER. On my left here is Tom Bates. He is president of the Signalman's Organization and also chairman of the Railroad Retirement Board; and Mr. McEntee here represents the Mediation Board in Chicago.

And we appreciate the opportunity here. Now, these gentlemen have two short statements, and I would request that their full statements be incorporated in the record.

[The statements follow:]

STATEMENT OF R.T. BATES

My name is R. T. Bates. I am President of the Brotherhood of Railroad Signalmen and Chairman of the Railway Labor Executives' Association's Committee on Railroad Retirement.

The Railway Labor Executives' Association is an unincorporated association with which are affiliated the chief executive officers of all of the standard national and international railway labor unions in the United States. The organizations whose chief executive officers are members of the RLEA are listed below:

American Railway & Airway Supervisors Association,
  Division of BRAC
American Train Dispatchers Association
Brotherhood of Locomotive Engineers
Brotherhood of Maintenance of Way Employes
Brotherhood of Railroad Signalmen
Brotherhood Railway Carmen, Division of BRAC
Brotherhood of Railway, Airline & Steamship Clerks
  Freight Handlers, Express and Station Employes
Hotel & Restaurant Employees and Bartenders'
  International Union
International Association of Machinists and
  Aerospace Workers
International Brotherhood of Boilermakers and
  Blacksmiths
International Brotherhood of Electrical Workers
International Brotherhood of Firemen & Oilers
International Longshoremen's Association
National Marine Engineers' Beneficial Association
Seafarers International Union of North America
Sheet Metal Workers International Association
Transport Workers Union of America
United Transportation Union
Yardmasters Department - UTU

Mr. Chairman, as you know all expenses for the administration of the Railroad Retirement Act and the Railroad Unemployment Insurance Act are paid directly from the Railroad Retirement Trust Fund Account which is maintained in its entirety by the employees and employers in the railroad industry. Although a part of our Budget process no monies in that account, certainly none used for the administration of our retirement and unemployment systems, are provided by the taxpayers of this country. That account is solvent and will be for some years to come, although due to the rather precipitous decline in employment in the railroad industry in recent years, it will be necessary for the industry, both management and labor, to make recommendations to the Congress regarding some modifications to its structure.

The Railroad Retirement Board has provided an efficient, effective administration of the laws which the Congress had included within the area of its responsibilities. It is imperative that that level of quality be maintained for the benefit of those men and women who have devoted their lives to the railroad industry and who now or will in the future require the Board's services. We know that the Congress, and particularly this Committee, has always been sensitive and fair to the welfare of railroad retirees. It has always shown compassion for the problems which these people face. The railroad retirees are grateful for the efforts of this Committee in dealing with their problems.

The continued efficiency and effectiveness of the operations of the Railroad Retirement Board are entirely consistent with past Congressional concern that decisions as to the scope and cost of government programs should be made by those who pay for, and are served by, those programs. As noted above, of course, the retirement program and the unemployment insurance program is paid for by the employees and employers in the railroad industry.

Last September, the Members of the Board submitted their agency's fiscal year 1988 Budget Request to Congress for the employment of 1557 full-time equivalent employees and $79.6 million, exclusive of the requests of the agency's Inspector General, for the purpose of adminstering the programs provided under the Railroad Retirement and Railroad Unemployment Insurance Acts. We sincerely hope that this Committee will, at a minimum fully support that request. Any reduction in the Board's personnel ceiling and administrative budget, or implementation of other proposals which might significantly change the operation of the Board, would have a serious impact on that agency's ability to provide the service which our constituents expect and support through the direct payment of their tax dollars; and, indeed, to which they are entitled.

Recently, tax reporting and accounting legislation was enacted by the Congress which placed a serious burden upon the administrative personnel of the Board. It required the Board to divert employees from its already over-burdened claims service activities to recomputation of the benefits to some 500,000 Tier I annuitants. These employees had to be taken from the agency's benefit payment and field service operations to comply with those new federally mandated tax requirements. We strongly believe that such activity should be supported through an increase in the Board's personnel rather than depriving railroad retirees and the sick and unemployed among railroad workers to have reduced the services which they receive from the Railroad Retirement Board.

On behalf of Rail Labor, we again would like to thank this Committee for your past efforts on behalf of railroad workers and their families through support of those programs affording protection against the economic hazards of old age, disability, unemployment, and sickness. We ask that you continue your support of those programs.

Thank you.

STATEMENT OF ANDREW M. RIPP, VICE PRESIDENT, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS AND MEMBER, RAILWAY LABOR EXECUTIVES' ASSOCIATION

My name is Andrew M. Ripp. I am a Vice President of the International Brotherhood of Electrical Workers and a member of the Railway Labor Executives' Association. I appear before you as Chairman of the Association's Committee on the Railway Labor Act.

The Railway Labor Executives' Association is an unincorporated assocation with offices in Washington, D.C., whose membership consists of the chief executive officers of all of the standard national and international railway labor unions in the United States. The organizations whose chief executive officers are members of the RLEA are listed below:

American Railway & Airway Supervisors
  Association, Division of BRAC
American Train Dispatchers Association
Brotherhood of Locomotive Engineers
Brotherhood of Maintenance of Way Employes
Brotherhood of Railroad Signalmen
Brotherhood Railway Carmen, Division of BRAC
Brotherhood of Railway, Airline and Steamship
  Clerks, Freight Handlers, Express and
  Station Employes
Hotel & Restaurant Employees and Bartenders
  International Union
International Association of Machinists and
  Aerospace Workers
International Brotherhood of Boilermakers &
  Blacksmiths
International Brotherhood of Electrical
  Workers
International Brotherhood of Firemen & Oilers
International Longshoremen's Association
National Marine Engineers' Beneficial
  Association
Seafarers Interntional Union of North
  American
Sheet Metal Workers' International
  Association
Transport Workers Union of America
United Transportation Union
Yardmasters Department - UTU

We urgently request you not to permit a reduction in the $6.5 million appropriation to the National Mediation Board. The Administration, supported by the members of the NMB, would eliminate all government payments for neutral referees to resolve so-called "minor" disputes in the railroad industry. This is a blatant breach of faith with the railroad employees of this nation at best. At worst, it is a clear violation of law. Section 3 First (e) of the Railway Labor Act [45 U.S.C. §153 First (l)] provides:

> Sec. 3. First. There is hereby established a Board, to be known as the "National Railroad Adjustment Board", the members of which shall be selected within thirty days after approval of this Act, and it is hereby provided -
>
> * * * *
>
> (l) Upon failure of any division to agree upon an award because of a deadlock or inability to secure a majority vote of the division members, as provided in paragraph (n) of this section, then such division shall forthwith agree upon and

> select a neutral person, to be known as "referee", to sit with the division as a member thereof and make an award.
>
> *   *   *   *
>
> The Mediation Board shall be bound by the same provisions in the appointment of the neutral referees as are provided elsewhere in this Act for the appointment of arbitrators and shall fix and pay the compensation of such referees.

Congress has ordered the NMB to "fix and pay the compensation of . . . referees" and the Administration and NMB members ask that the Board be deprived of the funds with which to execute that command.

The reasons they give for this position are two: a need to cut the budget deficit and a claim that the cost is not "fiscally justifiable".

Chairman Woods testified before this Subcommittee that over "the past 50 years the railroad industry has been the only private industry for which the Federal Government has financed the adjustment of employee grievances" and that the cost to the government during that entire period has been $51 million.

What Chairman Woods and the other NMB members did not tell this Subcommittee is that the law permits employees in other industries to strike over grievances or violations of their contracts; employees in the rail industry cannot do so. The railroad employees gave up their right to strike over grievances and contract violations in return for a governmentally funded arbitration board. They must submit such disputes to a standing arbitration board - the NRAB.

In order to secure a means of resolving disputes over the interpretation and application of collective bargaining agreements in the railroad industry, the rail unions in 1934 were compelled to give up their right to strike over "minor" disputes, that is, grievances and contract violations. And, when in 1957 a union took the position that the Act gave it discretion to go to the Board or to strike over its grievance, the Supreme Court held otherwise and emphatically based its decision upon its conviction, clearly demonstrated in the legislative history of the 1934 Act, that labor had traded its right to strike over "minor" disputes for a standing arbitration board created and maintained by the federal government. In Brotherhood of Railroad Trainmen v. Chicago River and Indiana Railroad Company, 353 U.S. 30 at 37 (1957), Chief Justice Warren, speaking for a unanimous Court said:

> The change was made with the full concurrence of the national railway labor organizations. Commissioner Joseph B. Eastman, Federal Coordinator of Transportation and principal draftsman of the 1934 bill, complimented the unions on conceding the right to strike over "minor disputes" in favor of the procedures of the Adjustment Board. (Emphasis supplied.)

Recognition of this concession of the right to strike as the *quid pro quo* for a federally financed compulsory arbitration board is repeated throughout the two succeeding pages of the Supreme Court's opinion in the Chicago River case.

The Congress has made a number of significant changes in the Railway Labor Act since the NRAB was created and began functioning in 1934. At no time has the Congress indicated that the services provided by the Board should be curtailed much less emasculated in the manner now proposed.

The scheme of the Railway Labor Act is very different from that of the Labor Management Relations Act because one of the former acts major purposes was, and is, to reduce the occasion for strikes in the railroad industry to an absolute minimum. It has been praised by legislators, the courts and legal scholars alike for the manner in which it has accomplished that objective - an objective which the Administration and the NMB would now destroy by effectively eliminating rail labor's basis for consenting to the creation of the arbitration board. Indeed, as the testimony of Chairman Woods indicates, the cost to the Federal Government of avoiding thousands of railroad strikes over grievances and contract violations ($51 million in 50 years) has been money well spent and it has saved it and the national economy many times that amount in lost taxes and income.

It is the view of rail labor that if the NMB members and the Administration achieve their goal, the basis for the Supreme Court's decision in the Chicago River case will have been removed. Congress, therefore in all justice, should affirmatively enact concurrent legislation which would permit railroad employees to strike over "minor" grievances just as employees in other industries. We should not be singled out for such discrimination.

Even in the absence of such Congressional action, however, there will be in law no compulsory arbitration requirement on management or labor in the railroad industry because there will be no place where the parties will be able effectively to submit their grievances to be arbitrated. Since the Chicago River decision held that rail unions cannot strike because of the existence of an arbitration board to which they must submit their "minor" disputes, it would seem evident that the effective absence of such a board by the destruction of the existence of its basis - the federally funded neutral referee - would enable the rail unions to strike over such disputes just as do unions in other industries. The joint goal of the Administration and the NMB members, if achieved, would plunge rail transport into chaos.

A full appropriation of $6,500,000 is necessary to enable the NRAB (together with the Special Boards) to carry out its statutory functions and the objectives of the labor peace so carefully designed into the Railway Labor Act. We urgently request that appropriation be made for the use of the NRAB with a clear directive from this Committee that at least $2.12 million of that amount be used for the employment of referees. The NRAB must be allowed to do the job it was created to do if Congress is to keep the bargain it made with rail labor in 1934.

Thank you.

Mr. BATES. My name is R.T. Bates. I am chairman of the Railroad Signalmen and chairman of the RLEA, the association of railroad labor executives, the Committee on Railroad Retirement.

I am accompanied by Jim and Pat today, and we most appreciate appearing beforeyou with the opportunity to comment on the fiscal year 1988 budget request of the Railroad Retirement Board.

As you know, the expenses for the Railroad Retirement Act and Railroad Insurance Act are paid entirely by employees and employers of the railroad industry. No general taxpayer money is involved.

Last September, the members of the Railroad Retirement Board submitted their agency's fiscal year 1988 budget request to Congress for 1,557 full-time equivalent employees and $79.6 million, exclusive of the request of the agency's inspector general, for the purpose of administering the program provided under the Railroad Retirement and Railroad Unemployment Insurance Act.

We sincerely hope this committee will at a minimum fully support this request. Any reduction in the board's personnel ceiling and administrative budget or implementing of other proposals which may significantly change the operation of the board would have a serious impact on that agency's ability to provide the services our constituency expects and supports with their direct payment of tax dollars, and which we indeed believe they deserve.

Recently enacted tax reporting and accounting legislation has caused a diversion to other duties of personnel, now not available to service beneficiaries, primarily recomputation of almost 500,000 tier one benefits. It is our understanding that the board employees have had to take from the agency's benefit and field service operations to comply with those new federally mandated tax requirements.

We strongly feel that such activities should be supported through an increase in board personnel, and not by reduction of employees available to perform the already overburdened claim service responsibility to the board.

On behalf of rail labor, we would again like to thank the subcommittee for its past efforts on behalf of railroad workers and their families through support of those programs, affording protection against the economic hazards of old age, disability, unemployment, and sickness.

Thank you very much.

Mr. MCENTEE. Chairman Chiles, members of the subcommittee:

My name is Patrick McEntee. I present this statement on behalf of Mr. Andrew M. Ripp, chairman of the Railway Labor Executives Association Committee on the Railway Labor Act. Mr. Ripp is unable to be with us here today, but has filed a statement with the subcommittee, and we ask that it be made part of the record.

Senator CHILES. It shall be.

Mr. MCENTEE. Thank you, Mr. Chairman.

We urgently request you not to permit a reduction of 25 percent in the appropriation of the National Mediation Board, as requested by the administration and by the members of the National Mediation Board, for the purpose of eliminating all Government payments for arbitrators of grievances and contract violations, so-called minor disputes.

At best, this is a blatant breach of the faith with the railroad employees of this Nation. At worst, it is a violation of section 3 of the Railway Labor Act, which requires that the National Mediation Board shall fix and pay the compensation of such referees.

The members of the National Mediation Board have testified here that the railroad industry has been the only private industry for which the Federal Government has financed the adjustment of employee grievances, which has cost the Government $51 million over the past 50 years.

What they did not tell you is that employees in other industries can strike over those grievances, but railroad employees cannot, because railroad employees traded that right for a federally funded arbitration solution to their grievances.

This tradeoff has been recognized by the Supreme Court as the basis for the establishment of the National Railroad Adjustment Board by the Congress in 1934. The $51 million spent over the past 50 years has been money well spent, considering the losses in Federal taxes and income which strikes over tens of thousands of grievances would have cost.

If we are to be deprived of federally paid arbitrators, then give us back the other element of the consideration, the right to strike as it exists in other private industries. The railroad employees of this country should not be singled out for discriminatory treatment.

We urgently request that you recommend a full $6.5 million appropriation for the Board, with $2.12 million specifically earmarked for the payment of the referees.

Thank you very much, Mr. Chairman.

Senator CHILES. Thank you very much. We appreciate your testimony, and Jim, for bringing these fellows up here.

Mr. SNYDER. We appreciate the opportunity very much.

STATEMENT OF JOSEPH J. MARINELLI, ASSOCIATE SUPERINTENDENT FOR PLANNING AND GOVERNMENTAL RELATIONS, ORANGE COUNTY PUBLIC SCHOOLS, ORLANDO, FL

Senator CHILES. Our next witness will be Mr. Joseph J. Marinelli, the associate superintendent of the Orange County public schools of Orlando, speaking for the American Association of School Administrators. Joe, we are delighted to see you here.

Dr. MARINELLI. Thank you, Senator.

My name is Joe Marinelli, associate superintendent for planning and governmental relations of the Orange County public schools in Orlando, FL, and currently president of the National Association of Federal Education Program Administrators.

I am here, however, today representing the American Association of School Administrators. We do first, Mr. Chairman, want to thank you—and this is the first chance I have had in many years to congratulate you for the fine work you have done on behalf of education in Florida. You have been a good listener. You have been accessible to us, and you have really been responsive to the special needs of children. And for that we thank you.

We share your disbelief over the President's Federal education budget, and we know that poverty is increasing in this country and that it is children from poverty that will make up the future labor pool in this country.

I want you to know that, of the 18,318 eligible chapter 1 children in Orange County, only 6,000 are being served at the current time. Education funding is a partnership, and so we rely greatly on Federal funds to help us in this regard.

Contrary to popular belief, State spending as a percentage of State budgets has decreased in recent years, as has elementary and secondary spending as a percentage of the gross national product. So we think that makes a statement for the need for Federal funding.

Specific recommendations, Mr. Chairman, are that all education programs be increased at least to maintain current service levels. Beyond inflation, however, we have some specific programs that need to be addressed.

Chapter 1, we would like to see that program increased by $500 million over inflation to serve an additional 200,000 at-risk children. I want you to know those funds are well spent.

Last year Orange County was recognized as a national exemplary program by the U.S. Department of Education. We were able to increase achievement levels in reading and math at least twice the national average. It is a program that is well served in Orange County.

The education of the handicapped, we would like to see that program increased by $500 million over inflation, $400 million for the State grant program and $100 million for the preschool incentive program authorized by Congress last year.

Early intervention for at-risk children is extremely important to us. We know of your concern for dropout prevention and would like to recommend $100 million in new funds for dropout prevention, either by adding it to chapter 1 for use at the secondary level or funding new dropout programs moving through both houses of Congress.

The dropout rate in Florida is one of the highest in the country and we believe funds in this area would be extremely helpful to us.

As far as Pell grants are concerned, this represents the hope for disadvantaged students to one day attend college. We would like to see that program increase by $600 million beyond inflation, thereby increasing the maximum grant to students.

Last year in the Higher Education Act Amendments, you established the professional development resource centers to assist teachers through technical assistance. We would like to see that program funded by $15 million. We believe that effective teacher training is essential to improving education.

The leadership in education administration development program, we would like to see that increased by $14.5 million or doubled. In Florida, the $100,000 provided through Federal funding simply will not go far enough to deal with all of the plans to improve management training by the local school districts.

And last, Mr. Chairman, Florida needs 10,000 new teachers next year and only 3,000 will come from colleges and universities in the State of Florida. We have to find ways to provide incentives for students to go into teacher education, and we believe the congressional teacher scholarship program and the Christa McAuliffe fellowship program are two programs that will serve in that regard. We would like to see the scholarship program at $20 million and the fellowship program at $3 million.

In conclusion, Mr. Chairman, let me thank you again for your support, and we believe these recommendations are reasonable in light of the national needs of this country.

PREPARED STATEMENT

Senator CHILES. Thank you very much for your testimony. We appreciate your being here and we recognize all the good work you have done in education.

[The statement follows:]

STATEMENT OF JOSEPH J. MARINELLI

Mr. Chairman and members of the Subcommittee. I want to thank you for giving me the opportunity to appear before you to discuss federal education funding levels for Fiscal Year 1988.

My name is Joseph Marinelli. I am Associate Superintendent for Planning and Governmental Relations for Orange County Public Schools in Orlando, Florida. I am also a member of the American Association of School Administrators, on whose behalf I am testifying today. AASA represents more than 17,000 local school superintendents and other school executives across the nation.

Allow me to start by saying that as a constituent of yours, Mr. Chairman, I appreciate how much you have done for education. You have helped young children make great strides over the years. Furthermore, you have held back the current Administration's attempts to sharply reduce our national commitment to education.

We at AASA share this Subcommittee's sense of disbelief over the federal budget for education submitted to Congress by the Administration in January. As the individuals ultimately responsible in our nation's school districts for operating a quality educational program for all our children, we recognize the critical importance of federal funds--even though they represent a relatively small portion of our budgets--to our local efforts to meet the special needs of growing numbers of educationally disadvantaged, handicapped and other at-risk children.

According to the Congressional Research Service and the Congressional Budget Office, 22.2 percent of all children in the U.S. now live in poverty. Included in that number are 46.7 percent of all black children and 38.2 percent of all Hispanic children. These numbers, and the real human need they represent, are growing, Mr. Chairman, not declining. Business is beginning to recognize that without a significant economic investment in education, these children--representing a growing portion of their labor pool--cannot hope to contribute to our nation's push for a more competitive stance.

The Department of Education has indicated that federal education assistance is not that important, because states and local governments are doing so much more for education. Even if that were accurate, Mr. Chairman, education in this nation is dependent on the solid support of three governmental elements: local, state and federal.

Farm and oil crises in the midwest and southwest states have hit some areas so badly that local property taxes, the very foundation of local financing for schools, have seen collection rates drop 20 to 30 percent in recent months in some states. And we're all aware of the severe financial crisis that is forcing across the board state funding cuts in Texas and Louisiana. Can we as a nation afford to allow regional economic crises to disrupt the quality of the education on which our economy depends? Census Bureau data reported in the Book of the States documents what these crises have done to the state commitment to education. According to this data, in 1979 states spent 38.8 percent of their budgets on education. The state budget share for education then dropped to 38.2 percent in 1981 and 82, and fell further to 37.3 percent in 1985.

Where are states putting their money? States, as well as local governments, are shifting funds away from education and into health and hospitals, prisons and law enforcement, and payments for utilities, according to the Commerce Department's publication, Governmental Finances.

Each year, as the Administration has appealed for fewer federal dollars for education, the Education Department has emphasized the huge amount--from total federal, state and local sources--that we as a nation spend on education. Those figures appear impressive, Mr. Chairman, but even they fail to make the case for less federal money. Because when you compare total education spending for elementary and secondary education with our Gross National Product--the best true test of our national committment to any enterprise--you see a real decline in that commitment, across the board.

In the 1975-76 School Year, for example, total elementary and secondary education expenditures stood at 4.11 percent of the Gross National Product. By 1979-80 they had fallen to 3.59 percent of GNP. And as of 1985-86 they stood at 3.55 percent. You and I know, Mr. Chairman, that with growing numbers of at-risk children, those figures are a recipe for disaster for this nation, as we look toward improving our standing in the world economy in the 1990s and beyond.

With these statistics in mind, we at the American Association of School Administrators respectfully recommend that this Subcommittee take the following action:

*Increase all education programs by a total of $800 million (4.9 percent) to cover the cost of inflation and allow maintenance of at least the current level of educational services in all programs.

*Increases beyond inflation:

1. The Chapter 1 program, Compensatory Education for Disadvantaged Children, should be increased by $500 million beyond inflation to bring the program to $4.6 billion. This will

enable us to bring Chapter 1 services to some 200,000 at-risk children. We currently serve only 40 percent of the children eligible to receive such services.

2. Education of the Handicapped (P.L. 94-142) should be increased by $500 million beyond inflation, with $400 million to be used for State Grants and $100 million to be used for Preschool Incentive Grants.

The State Grant increase will help drive federal handicapped education funds closer to the originally promised 40 percent share of the excess educational costs, which local districts are required to absorb to serve these youngsters. P.L. 94-142 funds are now at roughly 9 percent of excess local costs.

The Preschool Incentive Grants would enable us to meet the service requirements mandated for 3 to 5 year olds in last year's new preschool initiative, passed by the 99th Congress. As you know, the mandate will become effective in 1991. It is important for implementation of the mandate that these federal preschool funds be increased, making available to local districts adequate funds for delivering those preschool services.

3. The Subcommittee should dedicate $100 million in new funds for dropout prevention, by adding either an additional $100 million to Chapter 1 for specific use at the secondary school level, or by funding the new dropout prevention program which is moving in both houses of Congress.

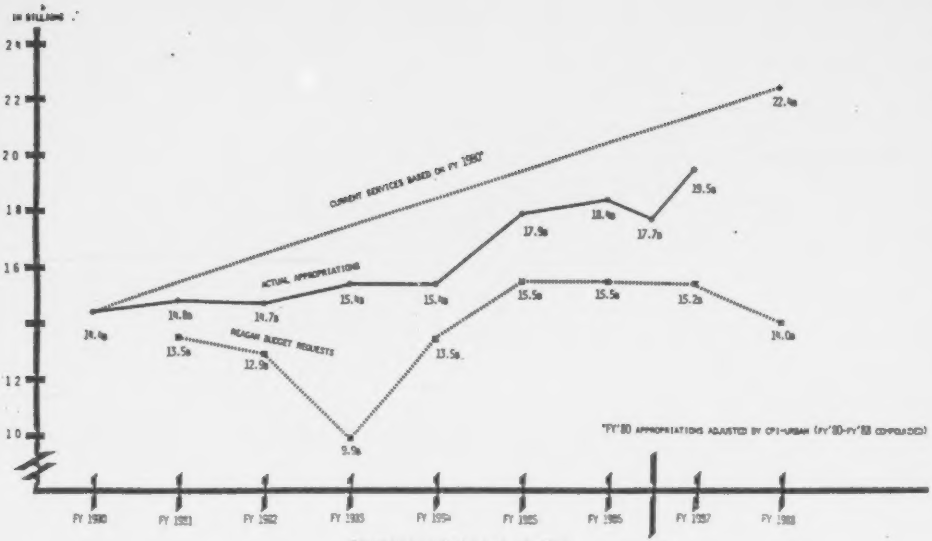
4. The Pell Grant program, which offers a tangible goal and real hope for disadvantaged elementary and secondary school students that they may one day be able to attain a college education, should be increased $600 million beyond inflation. That would allow the most disadvantaged of students to receive a maximum grant of $2300, instead of the current maximum of $2100, thus enabling them greater opportunity for choice in planning a college career.

5. The Professional Development Resource Centers created in last year's Higher Education Act Amendments should receive their fully authorized appropriation of $15 million. These centers would provide technical assistance to teachers in local schools in such areas as curriculum development, testing, classroom management, and use of educational technology. As administrators, we firmly believe that effective teacher training programs are essential to improving the quality of education.

6. The Leadership in Educational Administration Development program (LEAD) should be increased beyond inflation to $14.5 million, so that there will be expansion of leadership training among school administrators, the persons who are most responsible for the implementation of school reform at the local level.

Mr. Chairman and members of the Subcommittee, we believe these recommendations are reasonable, in light of our national needs. We at AASA thank you for your past commitment to education, and urge you to continue placing education, through your Fiscal Year 1988 appropriations bill, at the top of our national list of priorities.

Our children are our future. Help us ensure a sound future for us all.



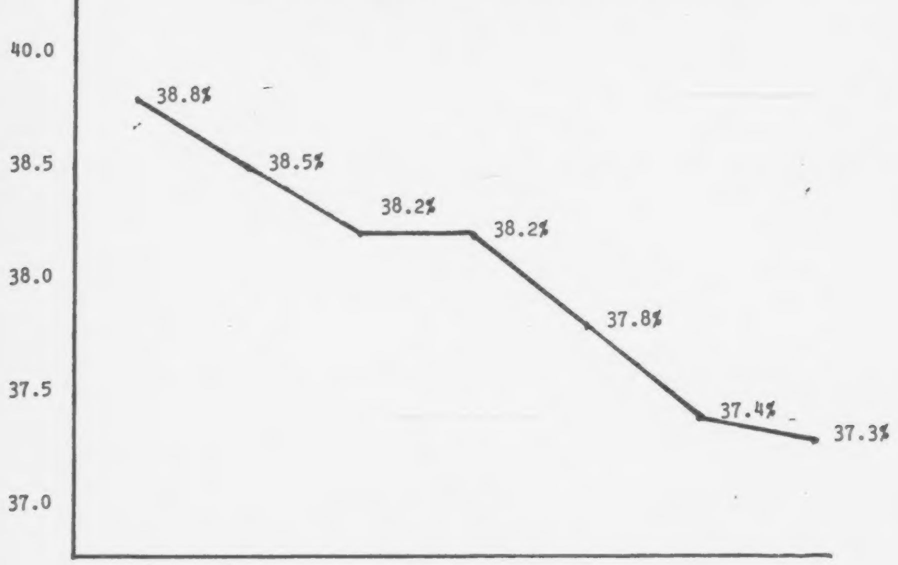
*FY'80 APPROPRIATIONS ADJUSTED BY CPI-URBAN (FY'80-FY'88 COMPOUNDED)

THE COMMITTEE FOR EDUCATION FUNDING
(JANUARY 12, 1987)

EDUCATION FUNDING LEVELS
FY 1980 – FY 1988

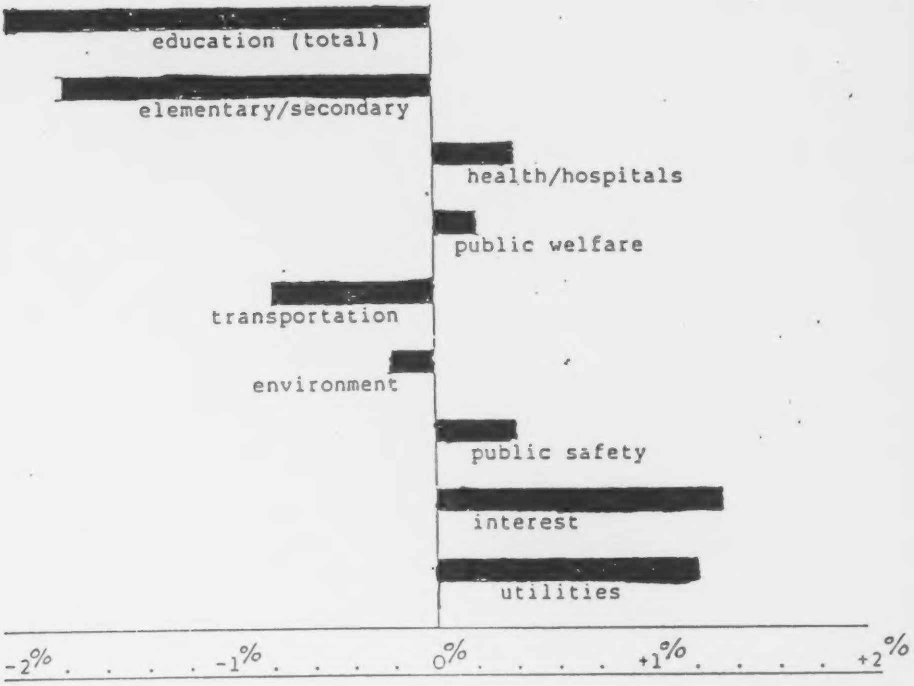
PERCENT OF STATE BUDGETS SPENT ON EDUCATION (selected years)

(data from U.S. Bureau of the Census)

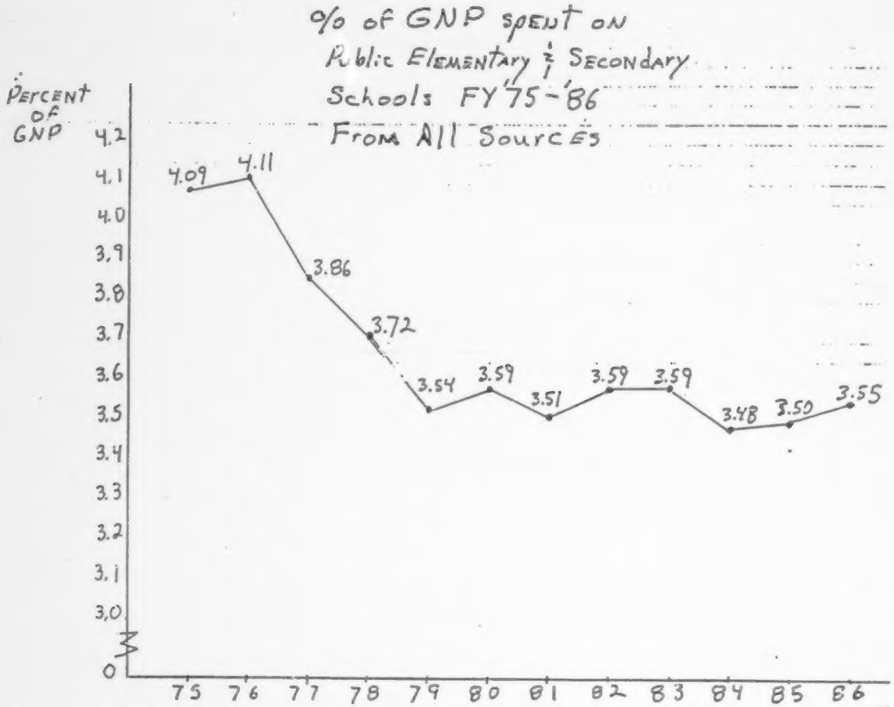


U.S. Bureau of the Census data as reported in the 1988 BOOK OF THE STATES

% CHANGE IN THE PROPORTION OF STATE AND LOCAL
GOVERNMENT EXPENDITURES BY FUNCTION
FROM 1978-1983



* data from US Bureau of the Commerce publication Governmental Finances.



% of GNP spent on Public Elementary & Secondary Schools FY'75-'86 From All Sources

Sources: Expenditures - Estimates of School Statistics 1984-85 & 1985-86
GNP - Presidents Budget FY'88

STATEMENT OF JAMES R. OGLESBY, VICE PRESIDENT, NATIONAL SCHOOL BOARDS ASSOCIATION

Senator CHILES. Now we will hear from Mr. James R. Oglesby of the National School Boards Association.

Mr. OGLESBY. Thank you.

My name is James R. Oglesby. I am vice president of the National School Boards Association. I am also a local school board member and university professor at the University of Missouri in Columbia.

Part of the testimony that I am going to make has been given already, so I would just like to talk to you during the time that I am here regarding some of the programs that we are providing, and speak to you on behalf of the funding for education.

On March 24, President Reagan came to our school district and he told the constituents of our district that we needed to do more education with less money. Well, in our district we are doing more education with less money. As a matter of fact, about 6 weeks before that the constituents of that district had voted a $19 million bond issue to remove asbestos from the building and provide improvements, and also to add some additional things that were necessary in order to provide for an early childhood education program that is going on within our State.

We appreciate the committee's attempt to reject some of the items that are in the President's budget, where they are really recommending some significant reductions in education, while in terms of mandated Federal education the services are still necessary to be provided for the kids in the local school districts.

The National School Boards Association has priorities regarding the funding of several programs. I will mention a couple or two or three of those programs. The impact aid is a very significant part of funding for school districts around the country.

Tuesday a week ago, I gave a speech down in Iberia, MO, where representatives were there from Proctor and Waynesville. These representatives are in the area of the Fort Leonard Wood area, where they are providing education for the school districts for kids in that district. They have a very serious concern about the loss of those revenues from impact aid B.

My background is vocational education. I was real concerned to see that in the recommendations, too, from the President's budget, that vocational education is not in there.

And I appreciate the opportunity to be here and I wanted to make sure that you—I appreciated hearing your comments that you would try to reject the attempts to remove vocational education.

PREPARED STATEMENT

Senator CHILES. Vocational education will be there, I can assure you, when we finish with this budget.

Mr. OGLESBY. Very good. Thank you, sir.

[The statement follows:]

STATEMENT OF JAMES R. OGLESBY

I. INTRODUCTION

I am James R. Oglesby, Vice President of the National School Boards Association (NSBA) and a local school board member from Columbia, Missouri. I am pleased to have this opportunity to testify before the Appropriations Subcommittee on Labor, Health and Human Services and Education and Related Agencies on behalf of 95,000 local school board members across the country.

II. OVERVIEW: EDUCATION AND THE ECONOMY

NSBA greatly appreciates that this Subcommittee has protected major education programs from the deep cuts recommended in recent Administration budget requests. Furthermore, we appreciate the significant increases appropriated in Fiscal Year 1987 for the major education programs like Chapter 1 and the Education of All Handicapped Act.

Over the last several years, NSBA has made the case before this Subcommittee that federal education programs have suffered significant cutbacks since 1980 and that further cuts would not help solve the deficit crisis. **This year, NSBA wishes to make a larger case for why this Subcommittee should continue to treat federal education programs as a national priority in the federal budget for Fiscal Year 1988 and beyond.**

A consensus has emerged among economists, elected policymakers like governors, legislators, and school board members, and leaders of business and industry that a strong educational system is essential if our nation is to overcome the economic and social challenges facing it. And yet, most local school districts are finding that increasing numbers of students are entering school with significant impediments to learning that put them "at risk" of failing to complete their schooling successfully. **In fact, of the more than 3.6 million children who began their formal schooling in the United States in September of 1986: twenty-five percent were from families who live in poverty; fifteen percent were either physically or mentally handicapped; fifteen percent were immigrants who speak a language other than English; fourteen percent were children of unmarried parents; and a full twenty-five percent will not finish high school.**

Our nation's schools are faced with the challenge of educating these "at-risk" children. Soon these children will make up one third of the U.S. workforce that must compete in a world marketplace where increased productivity is the key to success. Yet without an adequate foundation in literacy, computation, and critical thinking skills these students will be unable to fill the increasingly sophisticated jobs which our nation's economy now demands. **Fortunately, if adequately**

funded, those major federal education programs which are already in place can go a long way to meeting the needs of "at-risk" youth. Indeed, federal education programs offer Congress a most efficient way to make an immediate and cost-effective investment in human resource development to strengthen our economy.

III. INVESTING IN AMERICA'S FUTURE: SPECIFIC PROGRAM RECOMMENDATIONS

I would now like to make specific recommendations for appropriations for the major education programs. A summary chart is appended to our testimony for the Subcommittee's convenience.

First, NSBA recommends that all education programs should receive an across-the-board increase of five percent in order to maintain current service levels.

Second, we recommend significant real service increases for Fiscal Year 1988 in the Chapter 1 and Handicapped Education programs:

Chapter 1. The Chapter 1 compensatory education program is widely recognized as an effective program both in terms of increasing the educational achievement of disadvantaged students and targeting services to those students most in need. However, even with recent increases in funding, 50 percent of all eligible children across the country, or approximately 4.5 million children, are still unserved.

NSBA recommends an appropriation of $500 million over current services to expand services to at least 750,000 additional students in reading and math skills. NSBA also recommmends that the Subcommittee earmark **an additional $100 million specifically for secondary level basic skills and dropout prevention services.** Such a commitment will begin to counteract the tremendous social costs of young people leaving our schools without a diploma and basic employment skills.

To continue opportunities for disadvantaged youth at the postsecondary level, NSBA also recommends a $600 million increase in Pell Grant funding to keep pace with sharply escalating tuition costs.

Handicapped Education. By federal mandate, local schools are providing special education services to over 4 million students with physical, mental, and emotional handicaps and learning disabilities. The costs of special education have grown rapidly to over $7000 per pupil — more than twice as much as regular education. In addition, while Congress has just enacted a major expansion of services (including new federal funding commitments of $226 million) to pre-school handicapped children ages 3-5 years old, the Administration has recommended a 15 percent reduction in funds for programs for the handicapped.

P.L. 94-142 authorizes the federal government to cover 40 percent of the excess costs of fulfilling this federal mandate, but its share has never gone beyond 12 percent and now stands at nine percent. **NSBA recommends strongly that the Subcommittee appropriate an additonal $500 million to restore the federal share of excess costs to at least 12 percent.** Local and state governments cannot make up the shortfall any longer without sacrificing the general educational quality of local schools.

Third, NSBA also recommends additional funds for several federal programs to maintain or impove the quality of education.

Chapter 2. The Chapter 2 block grant is the major resource that schools can use to respond quickly to emerging needs for school improvement at the local level. NSBA believes that efforts in the Senate Budget Committee to cut this program by 20 percent, or $100 million, were no justified. **We urge this Subcommittee to reject any further attempts to scale back this highly successful program for school innovation and recommend instead an additional appropriation of $27 million to maintain current service levels.**

Vocational Education. Despite its stated commitment to increase American economic competitiveness and to achieve renewed excellence in American education, the Administration has recommended the total elimination of the $882 million vocational education program. Yet local school districts rely on this federal money to provide important supplemental resources for curriculum modernization, staff re-training, and the development of special vocational education programs for "at-risk" youth. **NSBA therefore recommends that the Subcommittee reject the Administration's proposed termination and appropriate an additional $45 million to maintain vocational education programs at current service levels.**

Impact Aid. The Administration's proposal for the complete elimination of $130 million in funding for impact aid "b" students whose parents either work or live on federal tax-exempt property will significantly reduce the funds available for educating the children in those communities. **NSBA urges the Subcommittee to reject the Administration's request and to appropriate an additional $37 million to maintain funding at the current services level.**

Other Significant Programs. NSBA also urges the Subcommittee to increase funding for other key programs. In particular, NSBA recommends **increasing the federal funding for bilingual and immigrant education** to maintain current service levels and to **provide new funding for the provisions of the new Immigration Reform**

Act of 1986. We also recommend **fully funding at $75 million the Magnet Schools Assistance Program** which provides quality education programs in many school districts undergoing desegregation. NSBA also recommends **increased funding for such special training programs as the Title II Math/Science program**, the LEAD program for school administrators, and teacher scholarship and training center programs.

Finally, after meeting the needs stated above, NSBA also recommends that the Subcommittee provide some **initial funding for the various education-related provisions** which may emerge from the pending trade bill.

IV. CONCLUSION

As locally elected and appointed officials, we believe that our citizens truly support a higher priority for education in the national budget. **We also believe that our federal education programs can spearhead the effort to meet the challenges of future economic growth and prosperity for all our citizens.** In determining appropriations for Fiscal Year 1988, we urge you to make a major investment in education, in our young people, and in the American future. On behalf of the National School Boards Association, I wish to thank the Subcommittee for this opportunity to testify.

Appendix

PROPOSED FUNDING FOR MAJOR EDUCATION PROGRAMS IN FY 88
(in millions)

Programs: Elementary & Secondary	FY 87 Appropriations	FY 88 President's Request	FY 88 NSBA Recommendation
Chapter 1: Education for the Disadvantaged	$ 3,952	$ 4,144 (+5%)	$ 4,752 (+20%)[a]
Handicapped Education (P.L. 94-142)	1,742	1,488 (-15%)	2,330 (+34%)[b]
Vocational Education	882	0 (-100%)	927 (+5%)
Chapter 2 Block Grant	529	529	556 (+5%)
Impact Aid	717	548 (-24%)	754 (+5%)
Bilingual Education/ Immigrant Education	189	143 (-24%)	199 (+5%)
Magnet Schools	75	75	75 [c]
Math/Science (Title II)	80	0 (-100%)[d]	100 (+25%)

[a] All NSBA recommendations include a 5.1 percent inflation increase. The Chapter 1 figure also reflects $600 million for additional services for "at-risk" students including $100 million earmarked for dropout prevention at the secondary level.

[b] This figure includes a major increase (+$500 million) to restore funds for excess costs to previous levels (12 percent) and to fully fund the new pre-school program at $226 million.

[c] This figure represents full funding.

[d] The Administration has proposed the elimination of the Math/Science and other teacher training programs in favor of a consolidated program.

STATEMENT OF WILLIAM F. PIERCE, EXECUTIVE DIRECTOR, COUNCIL OF CHIEF STATE SCHOOL OFFICERS

Senator CHILES. Now we will hear from Mr. William F. Pierce, executive director of the Council of Chief State School Officers.

Mr. PIERCE. Thank you, Mr. Chairman.

I am William Pierce, executive director of the Council of Chief State School Officers and the State Association of Commissioners of Education. We appreciate this opportunity.

I am accompanied today, Mr. Chairman, by Ms. Carnie Hayes, who I want to thank you for the 10 years of training you provided her so that she could do such an excellent job for us as our new director of Federal-State relations.

Senator CHILES. Well, I am not altogether pleased with that. [Laughter.]

Carnie did an awfully good job for us and we know that she will for you, and we miss her very much.

Mr. PIERCE. You have our testimony, Mr. Chairman. I would simply like to cover about six of the major points that are embedded in that testimony.

The first point focuses on the fact that the States, with our colleagues at the local level, are shouldering the major responsibility for the Nation's children in education. We are doing so and we are addressing some national concerns, such as the needs of at-risk children for access and equity in education, as well as the needs of all children for quality education.

These State efforts continue to increase financially and substantively, despite the cutbacks in all areas of Federal domestic support. However, we continue to look to the Federal Government and to Congress to continue its longstanding leadership role, particularly in providing direct assistance for special needs of at-risk populations and enhancing the capacity of State and local education agencies to meet the challenge of providing appropriate educational services for all students.

Our second point is to say that we support, as you might suspect, the $2.2 billion above continuing services that are included in the House-adopted education budget resolution for 1988.

We know that the Senate is currently in the process of working on a compromise package, and we trust that the Senate will make a similar commitment to those programs that make the difference in our economic strength and our competitiveness in international markets and the quality of life of all citizens 10 and 20 years from now, and by so doing you would join the House with rejecting the shortsighted cuts and program eliminations that the administration proposes, as you begin to develop and act on omnibus legislation to address the trade deficit and issues of homelessness and welfare reform and other national challenges facing the States.

And our third point, we urge that the education components of those packages build on, compliment, and fill the gaps in existing programs. If you work on appropriations or as you work on appropriations for that new legislation, we urge that you fund new initiatives with new limits. Since existing education programs are targeted to the needs of at-risk children and educational quality for all, we gain nothing, in our judgment, by the shift of current dollars or potential new dollars from those programs to new programs with similar goals.

As you, the 100th Congress, involves itself in the reauthorization of the elementary and secondary programs, including chapter 1, the foundation program for at-risk children, the House and Senate authorizing committees are seeking ways to target more funds to the neediest children and ensure that the services to bring them into the mainstream of education are of the highest quality through new provisions for parent involvement, preschool, and secondary basic school services, and sources of funds to offset the costs of *Aguilar* v. *Felton.*

The council supports this effort and hopes that this committee will provide adequate appropriations both for growth in the basic program and the new components to maximize its efforts.

It is particularly important that States receive adequate funds to administer these programs and provide technical assistance to local education agencies and to build their capacity to serve more children better.

As we support the full range of programs for the special populations, we also support continuation in growth of the Federal investment in the quality of education, and, therefore, we seek full funding of the Education for Economic Security Act and as much growth as possible in chapter 2, which is a very flexible program and allows the States and localities to create some very innovative program improvement at the State and local level.

And we encourage the maintenance of the flexibility of that program, but also suggest certain priorities be established. And we have made recommendations in that regard.

And finally, Mr. Chairman, we at the council have taken the lead to expand and improve the States' capacity to evaluate the cost benefit of various educational reforms and to develop standard definitions of dropouts and measures of student achievement in school performance.

And a key function of the Department of Education, which assists States and local agencies in that effort, is statistics gathering. We fully support the administration's request for an increase in the Office of Educational Research and Improvement, to meet the urgent priority of upgrading our educational data base.

If we do not know how well we are doing, we simply cannot bring about better changes.

PREPARED STATEMENT

Mr. Chairman, thank you for the opportunity to summarize our testimony.

Senator CHILES. Thank you. We appreciate your testimony here today.

[The statement follows:]

STATEMENT OF WILLIAM F. PIERCE

My name is William F. Pierce and I am Executive Director of the Council of Chief State School Officers (CCSSO), the professional association of state superintendents and commissioners of education. I appreciate the opportunity to testify before this Subcommittee on fiscal year 1988 funding for federal elementary and secondary education programs.

The states, along with our colleagues at the local level, are shouldering the major responsibility for educating our Nation's children. In doing so, we are willing and expect to be held accountable for results. However, we look to the federal government to support our efforts that address national priorities, such as access to education for children with special needs and quality education for economic growth and competitiveness.

The current wave of education reform began with the publication of A Nation At Risk. In its initial phase, the quest for excellence focused on the problems within our education system, and the states embarked on an ambitious course to raise quality, standards, and expectations in education. The second phase of education reform began as states and local education agencies addressed the special educational needs of at-risk students to that insure all children benefit from the reform effort.

The current focus of education reform is on a new reliance on education to address national issues like competitiveness. There is a growing awareness at the national, state, and local level of education's dual role in reducing the numbers of Americans at risk and in preparing all Americans for productive jobs. To be competitive, we must have both quality and equity in education.

The states and chief state school officers have not only taken the lead in adopting comprehensive reform programs, but also in measuring the results of various reform initiatives through common indicators of student achievement and school performance. In addition, much of the increased state expenditures for education has been directed toward better training and preparation of educational personnel and more competitive salaries for teachers. States are also improving curricula to ensure that the high school diploma is a meaningful indicator of student attainment of basic academic knowledge and skills.

All children benefit from the higher standards and expectations arising from the national concern with education, so long as all students are expected to succeed and are given the "first rung of the ladder" to excellence. Higher standards have been accompanied by efforts to ensure that every child has the opportunity to obtain a meaningful education. Many states have enacted their own compensatory education programs, preschool initiatives, and programs of special assistance for limited English proficient and handicapped students.

Currently the Council has a task force developing a model definition of an at risk student, as well as model state legislation for these youth. We are in the second phase of a four-year project to develop and implement a model definition of a dropout. Thus, the Council's policy is grounded in the dual concerns of quality and equity in education.

State support of the total cost of public education has risen from 43 percent in 1973 to over 50% in 1985. During the same period, federal support for education declined from over 8 percent to 6.3 percent, and local support dropped from 49 percent to 43 percent. According to a survey conducted by the National Conference of State Legislators (NCSL), in 1984, 1985, and 1986, education was the leading budget issue in the states. In 1985, all but two states increased funding for elementary and secondary education, with one state, New Hampshire, increasing its appropriation by 44.9 percent. In 1986, state legislatures generally continued the trend toward increasing education expenditures, even though a few states which were particularly hit hard by the decrease in oil prices and the farm crisis were forced to reduce all state spending.

The increases in state expenditures for education funding are particularly remarkable in light of deficit reduction efforts at the federal level. The cuts and freezes in funding of all federal state aid programs has created a situation where these programs are forced to compete for scarce dollars at the state level in order to make up for the shortfall in federal money. The Gramm-Rudman-Hollings legislation caused seven states to take precautions in FY 1986 to guard against federal aid reductions. These precautions included increased taxes to provide resources to local governments in the event of federal cuts or the creation of special funds. Twelve more states took similar steps in FY 1987.

Even in this atmosphere of fiscal restraint, states have remained committed to the delivery of a quality education. We ask only that Congress maintain its commitment to education both as a leader, and a provider of funds for special education needs, capacity-building, and incentives. Why should education receive increases in a time of fiscal restraint and austerity? Because education is one of those areas where we either invest now, or pay a lot more later -- in unemployment, welfare dependency, reduced productivity, and lost revenues.

As you begin your deliberations on FY 1988 appropriations, I would encourage this Subcommittee to take into consideration the funding assumptions for education programs which the House approved as part of the FY 1988 Budget Resolution. For function 500, the budget resolution assumes a level of funding for education programs which would allow all education programs to grow with inflation, plus $2.2 billion for increases above that amount for investments in critical existing education programs such as Chapter 1, Education for the Handicapped, the Education for Economic Security Act, Pell Grants, and the College Work Study programs.

CCSSO fully supports the education assumptions in the House budget resolution and hopes that the Subcommittee will take these assumptions into strong consideration when setting the appropriations levels for education programs. We are aware that the Senate is currently working on its version of the resolution, and we hope that the outcome yields a mark for education comparable to that adopted by the House.

Last week, the House of Representatives passed omnibus trade legislation, including an authorization for $500 million for education programs to improve the competitiveness of our schools. The Senate Labor and Human Resources Committee is considering similar components in S. 406, the Education for a Competitive America Act. If this type of legislation is enacted, you will be demonstrating, once again, the importance that Congress places on education and its pivotal role in maintaining our Nation's strength.

CCSSO believes that the education portion of the trade legislation should build upon existing education programs instead of duplicating them. New initiatives should fill gaps and refine and target programs toward changing needs. Most importantly, new initiatives to enhance competitiveness must be funded with new monies.

Access and quality in education are the cornerstones of national competitiveness. Our existing education programs are targetted to meeting the educational needs of special populations and improving the quality of teaching and learning. To shift funds for new programs from existing ones which address the same, or similar, goals would achieve nothing. By providing growth for high priority existing programs and augmenting them with injections of funds into critical new initiatives, Congress will be making a true investment in the economic future of the United States.

As you know, the 100th Congress is also in the process of reauthorizing all federal elementary and secondary education programs. This is an excellent opportunity to reexamine these programs, building and expanding on their strengths and targetting and refining those that could better achieve their purposes. CCSSO believes that the education of our youth can only be accomplished through a federal, state, and local partnership. In the reauthorization process, as well as in the funding cycle, we urge Congress to maximize scarce resources by investments in the programs that promote change at the school and classroom level, as well as in programs that build the capacity of states and local education agencies to offer all children quality services.

Chapter 1, the largest federal elementary and secondary education program, provides financial assistance to school districts for compensatory education services, and to state education agencies for migrant, handicapped, and neglected and delinquent children. Chapter 1 has proven to be a successful program. A U.S. Department of Education study shows that low-achieving students who participate in Chapter 1 do significantly better in school than do their counterparts who do not participate in this program. Data from the Educational Testing Services (which produces the SAT) and the National Assessment of Education Progress (NAEP) indicate that the rise in SAT scores and other education achievement indicators contained in the Department of Education's Wall Chart are clearly related to the compensatory education services provided by the Chapter 1 program. With 22% of our Nation's children living in poverty, the importance of Chapter 1 and similar programs at the state level cannot be overstated.

The modest funding increases Chapter 1 has received since 1980 have been inadequate to serve the additional 2.2 million children who live in poverty or to keep up with the cost of service delivery. Less than 40% of the eligible children are being served. In the effort not to drop children from the program, the scope and intensity of services has been curtailed for many of them.

In FY 1987, Chapter 1 received a $400 million increase. This funding boost did little to expand the number of children served or the range of services due to the increased cost most school districts faced in serving eligible children. Such costs include delivering services to private school children in alternative settings to meet the requirements of the Aguilar v. Felton decision. Also, as a result of the education reform movement, teachers are receiving much deserved increases in salaries. The appropriations granted to Chapter 1 in recent years have done little to offset the increasing fixed costs in operating a Chapter 1 program.

The House version of the new Chapter 1 bill contains a provision for increasing the authorization ceiling by $500 million for each year until full funding is achieved. The Council of Chief State School Officers fully supports this provision, and if this, or a substantially increased authorization level is enacted, I urge you to do all you can to provide full funding each year. By providing sizable funding increases to this very important program, you will be making a critical investment in the program that serves as the foundation of educational assistance to disadvantaged children. The cost-benefit of this type of early intervention is great.

Recognizing that deficits and scarce resources make full funding of Chapter 1 extremely difficult, the Council urges Congress to invest in state and local initiatives that build capacity and better serve more eligible children. In the reauthorization process, Congress is considering a new preschool program, a basic skills and dropout prevention section for secondary schools, new provisions for program evaluation and improvement and parent involvement, as well as a source of funds to offset the costs of implementing the Aguilar v. Felton decision. The Council supports new components such as these that build on the existing program and enhance its effectiveness and hopes to see them authorized and funded. CCSSO particularly supports provisions and funding for adequate state administration, technical assistance to local education agencies, and incentive grants to states that supplement federal compensatory education programs with their own.

The second largest federal pre-college program, the Education for the Handicapped Act (EHA) has received funding increases equalling inflation. These increases, however, have maintained neither the same level of services nor the federal share of the cost of educating handicapped children. In FY 1980, EHA provided 12 percent of the total amount spent on the education of handicapped students. By FY 1986, the federal share amounted to only 7 percent.

The number of students identified as handicapped has increased, and the cost of services has risen faster than inflation. Last year Congress approved expanding EHA services to the pre-kindergarten level (ages three to five), which would enable us to provide early, cost-effective intervention for these children. I encourage the Subcommittee to adequately fund this new component, as well as the program for school-age children, so that handicapped children do not have to compete with non-handicapped students and those with other special needs for limited resources. Without adequate federal resources, our national commitment to equal educational opportunity is in jeopardy.

Adequate funding for the Bilingual Education and the Emergency Immigrant Education programs is key to ensuring that the recipients of these programs have access to an equitable education. Although these two programs are small, they do make a difference in providing a quality education to students who have recently immigrated to this country and/or who lack the English skills to become productive members of society.

The Women's Educational Equity Act (WEEA) helps to remedy discrimination against women and girls in our school systems. Grants and contracts are awarded each year for the development, demonstration, and dissemination of model equity programs of national, statewide, or general significance. Last year, Congress reduced the funding for this program from $6 million to $3.5 million. I encourage the Subcommittee to restore the WEEA appropriation to at least the FY 1986 level plus an increase for inflation.

Like the federal investment in access, the federal commitment to educational quality and improvement is a vital part of meeting our national goals and challenges. The other half of the Education Consolidation and Improvement Act, Chapter 2, enables states and localities to implement a variety of program improvements according to their needs. As currently constituted, Chapter 2 funds may be used for any of the authorized purposes of the 28 antecedent programs which were consolidated into the block grant, or any other activity to supplement improvement, research, teacher training, and instructional support deemed appropriate by a local educational agency. Chapter 2 has been a critical source of "quick response" funds for state and local education agencies to initiate innovative projects and respond to new challenges.

Based on the CCSSO recommendations, the House Education and Labor Committee's new Chapter 2 legislation has retained the current flexibility of the program, and focuses the funds on national priorities, such as at risk and special populations, effective schools, instructional program improvement, and personnel development. Knowing of Congressional concern about accountability for program results, CCSSO has also recommended provisions for goal-setting and evaluation based on outcomes for Chapter 2. I would recommend to the Subcommittee that this program receive at least an inflationary increase.

The Education for Economic Security Act is targetted to our teacher training and curriculum improvement needs. CCSSO went beyond the assessment requirements of the original legislation to launch a voluntary effort among the states to develop standard indicators of the quality and supply of mathematics, science, and foreign language teachers. Full funding of the existing program, as well as any new components enacted with the trade legislation, will provide a foundation of support for state and local efforts in the subject areas for years to come.

Like the math-science-foreign langauge program, there are a several federal programs that are equally important to our national commitment for quality and equity in education. Chief state school officers urge this Committee to reject the drastic cuts proposed by the Administration for these programs, as well as in the core programs for educational access. The Administration's proposal to eliminate federal support for vocational education is particularly short-sighted. While the President's budget request indicates the overmatch of federal funds with state and local dollars is the rationale, CCSSO believes that the overmatch is evidence of the leveraging made possible by federal investment in programs like voc ed. We urge the Committee to provide as much support and growth for these programs as possible.

I mentioned earlier the work the Council is doing to expand and improve the states' capacity to evaluate the cost-benefit of various educational reform initiatives, develop a standard definition of dropout, and measure student achievement and school performance. A key function of the Department of Education is statistics gathering, research, and operation of regional labs and centers by the Office of Educational Research and Improvement. Upgrading our education statistical data base in education is an urgent priority, especially as it relates to monitoring the nationwide effort to improve our schools. The Council supports increased funding for these activities, especially in light of the steps being taken in the reauthorization to insure the integrity and autonomy of the Center for Education Statistics.

The education of our nation's children can best be accomplished when federal, state, and local concerns come together in a partnership. At the state and local level, many exciting and innovative activities are taking place which are improving our schools. These activities, in turn, are making our country stronger by producing better workers. The federal government must continue its support of education by providing adequate funds to federal elementary, secondary, and higher education programs. Without a federal, state, and local partnership for education, our Nation's strength in the world economy is in jeopardy. Again, I would like to thank the Subcommittee for the opportunity to testify.

STATEMENT OF WINFORD MILLER, MIGRANT SCHOOL RECORD TRANSFER SYSTEM, ARKANSAS DEPARTMENT OF EDUCATION

Senator CHILES. Now we will hear from Mr. Winford Miller of the migrant school record transfer system in the Arkansas Department of Education.

Mr. MILLER. Mr. Chairman, committee members:

I would like to take this opportunity to thank you, sir, for allowing me the opportunity to speak on behalf of the 750,000 migrant children and migrant educators of this Nation.

We believe these children are benefiting from the services rendered under chapter 1 of the Educational Consolidation Improvement Act, the ECIA, as amended in 1981. We also believe these are the greatest at-risk children in our Nation today.

I have been working in the Migrant Education Program since inception and I think I can speak on behalf of the directors and say that it has been a very successful program. At the inception of the program, we had children who, about the eighth grade is the highest that they ever attained. Today we are graduating 4,000 and 5,000 migrant children across the Nation.

The Migrant Education Program is the largest and most dynamic State education agency administered by the U.S. Department of Education under chapter 1. The uniqueness of this program opened communications and coordination between all States, and certainly we think this is the most important thing of the program, since many of our children not only reside in one State, but many school districts and many States across this Nation.

A major component of this program is the migrant student record transfer system, designed by the States, implemented by the States, and continues to be redesigned in order to meet the necessary things that take place in education during the migrants' stay in their schools.

The MSRTS is a very dynamic system and is being refined by the committees each day. Recently, my office completed an analysis of the system's information. We found some very revealing things.

One, the study found that there is a positive relationship between the students' grade level and entry into the migrant program. The younger the migrant student is at entry, the better he performs across all remaining grades. This is why, Mr. Chairman, we are recommending that this program be funded for ages 3 through 21.

Children at entry age 6 score higher on standardized tests in every grade level when compared to those migrants who have later entry dates. The data indicates that the students' performance on arithmetic tests increases with the number of math skills recorded.

Test performance rose dramatically for students in grades 9, 10, and 12 when approximately 20 or more math skills were recorded. This study reveals that the level of reading skills of migrant students is approximately 1½ grades below the actual reported grade level of the students.

However, standardized test performance increases for students in grades two, three, four, seven, and eight when more than 14 reading skills are recorded. You see, this program has been way ahead of its time. They designed skills continuums and reading, math, early childhood, and oral language back in 1973.

They have talked constantly about going back to the basics. This program has been back to the basics for several years.

PREPARED STATEMENT

Senator CHILES. Mr. Miller, we want to thank you for your statement and we will pursue the rest of it with our staff. We are just going to have to conclude, so we can get our witnesses here. Many of you have come from out of town today.

Mr. MILLER. All right, sir. I would like for my entire text and testimony to be included and made part of the record, sir.

[The statement follows:]

STATEMENT OF WINFORD MILLER

I would like to thank you for the opportunity to present testimony on behalf of the 750,000 plus migratory children of migratory agricultural workers and fishermen who are benefitting from the educational services provided under Chapter 1 of the Education Consolidation and Improvement Act (ECIA) of 1981 as amended. At your request, I am testifying today as a citizen with more than 25 years of experience in working with migratory families. The past 20 years have been in the service of migrant education, as the state director of migrant education for the State of Arkansas from 1966-68. Since 1969, I have been the director of the Migrant Student Record Transfer System (MSRTS), a national computerized network to transfer academic and health information on migrant children attending the schools of our nation.

The migrant education program is the largest and most dynamic State Education Agency (SEA)-administered program funded by the U.S. Department of Education under Chapter 1 of ECIA. Authorized in 1966 as an amendment to Title I of ESEA, the program has blossomed into one of the best kept secrets in the federal government. The uniqueness of the program has opened communication and coordination between all states. The federal government has been challenged to become a full and equal partner in the conduct of the program on a national basis. At the center of all efforts is the migrant child, whose education depends, not on the efforts of one local school district in a state, but on the combined efforts and leadership of many school districts in as many states as the child may reside while his or her parents, and oftentimes the child, harvest and process our nation's food.

Therein lies the uniqueness of this program. A program whose purpose has always been to provide educational opportunities for migratory children and not to perpetuate circumstances.

A major program component is the Migrant Student Record Transfer System (MSRTS). The MSRTS is a computerized system for the storage and retrieval of academic skills and vital health information on migratory children. Through a national network of computer terminals, the 49 participating states, Puerto Rico and the District of Columbia can communicate this information on an interstate basis to assist in the development and delivery of the migrant's educational services. Based in Little Rock, within the Arkansas Department of Education, the MSRTS was conceived and developed by the states in response to the most critical need--communicating data on migrant children while they reside in each respective state. The system was implemented in 1969, became fully operational in 1971 and currently contains more than 750,000 migratory children's records.

The MSRTS is a dynamic system constantly being refined to meet the unique needs of migrant children and the states that serve them. The most notable enhancement was the development of the Skills Information System to communicate easily understood skills statements in math, reading, early childhood education and oral language development. Another is the Secondary Credit Exchange System which can store and transmit critical information on the courses enrolled in and the credits earned by migrant students at the secondary level. Both enhancements resulted from the work of numerous interstate committees of migrant educators. The MSRTS does not dictate curriculum, textbooks or courses of study, it does provide the states with a wealth of information they have recorded.

Recently, my office completed an analysis of the system's information to assess the extent the data could be used to indicate the performance of migrant children. It is fully understood that the system was not designed for research nor for evaluation purposes. However, an examination of more than 144,148 records did provide the following information for calendar years 1983-85:

1. The study found that there is a positive relationship between the student's grade level and entry into the migrant program. The younger the migrant student is at entry the better he performs across all remaining grades.
2. Children who enter at age six score higher on standardized tests at every grade level when compared to those migrant children who have later entry dates.
3. The data indicates that the students performance on arithmetic tests increases with the number of math skills recorded.
4. Test performance rose dramatically for students in grades 9, 10 and 12 when approximately 20 or more math skills were recorded.
5. The study reveals that the level of reading skills on migrant students is approximately one and one-half grades below the actual reported grade level of the student. However, standardized test performance increases for students in grades 2, 3, 4, 7 and 8 when more than 14 reading skills are recorded.

We could expand, but the overriding conclusion is that when states identify and enroll a migrant child at the earliest possible age, and his record is diligently kept current and rapidly transmitted, the migrant child will perform well on standardized tests, in all the remaining grades.

My colleagues and I had an opportunity to study the legislative proposal submitted for the reauthorization of the Education Consolidation and Improvement Act of 1981. Specifically, we have analyzed

H.R.950 (the Hawkins, Goodling Bill) and H.R.1155 and S.594 which are identical proposals by the Administration. This testimony is based on the provisions that impede the education of migratory children. I lend my support to the migrant provisions of H.R.950 since they, if enacted, would provide a more realistic approach to addressing the needs of the thousands of migratory children. The Administration's proposals would negate the great gains the program has made over the past 20 years. The Administration proposes the following:

1. Eliminating the definitions of "Agricultural Activity," "Currently Migratory Child," "Fishing Activity," "Migratory Worker" and "Migratory Fisherman." No other definitions were proposed, leaving it open to develop definitions by regulations.
2. Removing the 85% minimum payment of the previous year's grant provision from all Chapter 1 programs and offering no substitute.
3. Reducing the amounts that a formerly migratory child can accrue for the program by substituting a formula to reduce by one fifth the amount they can accrue for each year they are classified as formerly migrant up to five years. This presupposes that all migratory children cease to migrate at the beginning of every year which they do not. Calculations would have to be made for every formerly migratory child to determine which portion of the year they were at one level and which portion at the reduced level. Migrant children fluctuate between classifications (currently, formerly) throughout the calendar year.
4. Reorders the priority of services provision in the current statute and eliminates preschool services to formerly migratory children.
5. Requires a state to annually obtain parental concurrence for a child to be considered formerly migratory.
6. Eliminates the conditions the Secretary must follow before redirecting the contract for the MSRTS from one state to another. Also, the Administration wants to change the MSRTS into a federal system of records to give it access to migrant academic and health information which is personally identifiable.

These are but a few of the Administration's proposals the states object and emphatically oppose.

The following recommendations have been developed and respectfully submitted for consideration to improve the program and are consistent with those proposed in H.R.950 by Congressman Hawkins of California and Congressman Goodling of Pennsylvania. These recommendations are in concert with those proposed by the National Association of State Directors of Migrant Education (NASDME), and the Interstate Migrant Education

Council (IMEC) of the Education Commission of the States (ECS).

Recommendations for program improvement:

1. That the Migrant Student Record Transfer System continue to be funded and the language be consistent with P.L. 99-159 and the Hawkins and Goodling Bill H.R.950. This would keep the $6 million floor for inter- and intrastate coordination and at the same time would not be a federal information collecting agency.
2. Allowing the states a five percent leeway to compensate for errors in the documentation of eligible migratory children.

   Rationale: Statewide identification and recruitment of eligible migratory children are an extensive operation requiring many people and comprehensive documentation. Auditors have come into a state, sample a handful of children's records and apply the percentage of children they deem ineligible across the entire state. Although the Department acknowledges that decisions on eligibility are judgement calls, the auditors do not take this into consideration and audit exceptions are taken against the entire migrant child population of the state in direct proportion to the percentage the auditors deemed ineligible from the handful of sampled records. The states oppose this procedure as grossly unfair.
3. Development of a national standard form for certification of migrant students. The form should contain only the minimum criteria for eligibility thereby allowing the states to augment the data to satisfy each states' informational needs. Parental signatures should not be required to certify eligibility.
4. Section 142.(a)(2) of Title I, ESEA, should be amended to reflect the current nomenclature of programs that migrant education must coordinate. The listing should include Section 418 of the Higher Education Act, Section 402 of the Job Training Partnership Act, all appropriate sections of the Community Services Block Grant Act and programs such as migrant Headstart, migrant health and all applicable programs in the Departments of Labor and Agriculture.
5. Revise the language relative to parental involvement to that proposed by H.R.950 (Hawking, Goodling Bill).
6. Amending the requirement for states to assess the sustained gains of migratory children by permitting them to measure only those formerly migratory children who have been served under this subpart for at least two consecutive years at a local program school site. Children who are currently migratory would be excluded from the sustaining gains measures completely.

7. Authorize the use of the Migrant Student Record Transfer System (MSRTS) to receive, maintain and transfer Individual Education Plan (IEP) for those migratory students who have been determined to be in need of special education programs.
8. Include in the statute a provision to require the development and implementation of a national program of credit exchange and accrual.
9. Create a National Commission for the Education of Migratory Children. This would be consistent with the amendment by Congressman Bill Ford to H.R.950.
10. I totally support the provision in H.R.950 that provides for the development of a program named "Even Start Program" and support the inclusion of a three percent set aside for migratory children. I ask for consideration of augmenting this provision with a set aside authority for the states administrative costs.
11. I further recommend that this committee support the "Secondary School Programs for Basis Skills Improvement and Dropout Prevention" contained in H.R.950. I, respectfully, request this committee to ensure that a specific set aside authority be included in this section for migrant children similar to the set aside provision in the "Even Start Program." This recommendation is made in view of the high dropout rates among migrant secondary students.
12. Amend Sec. 142.(b) of Title I, ESEA to define the area served by the program to mean the entire state. This could be consistent with the "residing in the state" requirement in Section 141.(b)(1)(i).
13. Fully fund the migrant education program to permit for the full implementation of the provisions of these recommendations, and such action would allow us to place a computer terminal at every school site that serves 50 or more migratory children.

Mr. Chairman and members of the subcommittee, I wish it were possible for you and your distinguished colleagues to spend some time observing and discussing the many activities involving migrant education. The dedication of the teachers, parents, administrators and local community groups is infectious. The children are responsive and eager to participate in all program activities. It is not a program with high visibility, however, no other program is more satisfying and rewarding to know your efforts are appreciated and the most deserving of our citizens, the migrant workers and their families benefit.

I make the recommendations to improve the programs of education for migratory children based on my 25 years of experience working with migrant children and working closely with states participating in the program as director of the MSRTS. I, respectfully, submit this testimony in the hope that you will consider it and we can work cooperatively to provide the best educational programs and opportunities to the migratory children of our nation.

Senator HARKIN. The next witness is Charles Robertson of the Red Schoolhouse. Is Charles Robertson here?

[No response.]

STATEMENT OF GERDA BIKALES, EXECUTIVE DIRECTOR, U.S.ENGLISH

Senator HARKIN. Gerda Bikales, executive director, U.S.English.

Welcome to the subcommittee. I do not have a prepared statement.

Ms. BIKALES. Well, I have several. They must have gotten lost in the mail, it seems.

Senator HARKIN. Without objection, it will be made a part of the record in its entirety. I don't know how the chairman has been operating before, but what I would like to do is to ask you to take just a few minutes to summarize your testimony.

Ms. BIKALES. Well, it is very brief, and I will try to do so.

The 275,000 members of U.S.English want to thank you for this opportunity to accept our recommendations on funding bilingual education.

Some momentous events have taken place since I last appeared before you last spring. The people of California, as you know, our most populous State, last November made English their official language by a historic 3-to-1 vote. The California Bilingual Education Act, which covers more immigrant children than any other State law, failed to win reauthorization. It is likely that it will expire this July.

The voters in California had a chance last year to express at the ballot box what people in other States can only tell you in their constituent mail and through opinion polls. They want renewed emphasis on English and Government policies that are supportive of that emphasis, not obstructive as they have been all too often.

The message of California is clear. The representatives of the people should not support a program that is more political than educational, a program that dogmatically dictates one methodology and only one. Do not side with the vested interests that want to keep our children segregated by language for much of their schooling. Do not give aid and comfort to those who use the schools to entrench language divisiveness in our country.

Many parents of minority language children want their children to have more exposure to English, not less. In San Antonio this year, parents for the first time were asked to fill out a form by which they must formally approve or disapprove the placement of their children in bilingual classes. The year before, only 22 eligible students were not enrolled in bilingual education. This year the number of eligible students declining participation jumped to 1,131.

Under the Federal Bilingual Education Act, we have seen it become a shield, a philosophic shield of sorts for all sorts of excesses, and until it becomes truly an instrument for helping the child who does not know our language by allowing local schools some leeway in dealing with the problem, U.S.English advises this committee to keep appropriations below the $100 million level.

That must be good news to people who hear nothing but demands for increases. U.S.English respectfully requests that the money thus saved be appropriated to the Adult Education Act, specifically for English language instruction to help the many adults who want to learn English.

PREPARED STATEMENT

We appreciate this opportunity to present our views on funding Federal bilingual education programs. Thank you.

Senator HARKIN. Thank you, Ms. Bikales. Thank you very much.

[The statement follows:]

STATEMENT OF GERDA BIKALES

The 275,000 members of U.S.English thank you for this opportunity to present to you our recommendations on funding the Bilingual Education Act for fiscal year 1988.

Some momentous events have taken place since I last appeared before you in the spring of 1986. The people of California, our most populous State, last November made English their official language by a historic 3-to-1 vote. The State's Bilingual Education Act, which covers more immigrant children than any other such State law, failed to win reauthorization and is slated to expire this July.

The voters in California had a chance last year to express at the ballot box what people in other States can only tell you in their constituent letters to you and through opinion polls: they want renewed emphasis on English, and Government policies that are supportive of that emphasis, not obstructive as they have been for two decades. The message of California is clear: as representatives of the people, do not support a program that is more political than educational, a program that dogmatically dictates one methodology. Do not side with the vested interests that want to keep our children segregated by language for much of their schooling. Do not give aid and comfort to those who use the schools to entrench language divisions in our country.

This past year we have seen proof that many parents of minority language children want their children to have more exposure to English. In San Antonio this year, parents for the first time were asked to fill out a form by which they must formally approve or disapprove the placement of their children in bilingual classes. The year before, only 22 eligible students were not enrolled in these classes. This year, the number of eligible students declining participation in bilingual classes jumped to 1,131!

In Hereford, TX, incensed parents confronted the school authorities with the charge that their children were being kept in bilingual classrooms despite the fact that they were fluent in English. The bilingual education official explained to the parents that though the children functioned well in English, they still were not thinking in English, and thus the need to detain them for an unspecified number of years in Spanish-taught classrooms. One is left to wonder how continued teaching in Spanish will help these youngsters to think in English any time soon!

Until the Federal Bilingual Education Act is no longer the philosophic shield for these excesses, until it becomes truly an instrument for helping the child who doesn't know our language by allowing local schools some leeway in dealing with his problem, U.S.English advises this committee to keep appropriations below the administration's request.

U.S.English respectfully requests that the proposed appropriations be cut to the $100 million level, and that the money thus saved by appropriated to the Adult Education Act, specifically for English language instruction to help the many adults who want to learn English.

We appreciate this opportunity to present our views on funding Federal bilingual education programs next year.

STATEMENT OF DR. JOHN CASTEEN, PRESIDENT, UNIVERSITY OF CONNECTICUT, ON BEHALF OF AMERICAN COUNCIL ON EDUCATION

Senator HARKIN. Next, we will go back to Dr. John Casteen, president of the University of Connecticut. He is here on behalf of the American Council on Education.

Senator WEICKER. I look forward to hearing Dr. Casteen's comments, and if he errs or slips I will be all over him. [Laughter.]

You know what goes around comes around. When he was the director of admissions at the University of Virginia before he got to Connecticut, I wanted to send my son to Virginia, and he could not get in. [Laughter.]

So now, you see, I finally have Dr. Casteen.

Dr. CASTEEN. Well, I guess I have no secrets.

Senator, I appreciate the opportunity to speak to the subcommittee on behalf of the American Council on Education and other associations that represent higher education.

The prepared testimony which has been shared with staff addresses each of the major provisions of the proposed budget for the Department of Education that touch higher education. I would like in my few moments to address three issues that I think are crosscutting issues.

Our primary concern is that the programs that have the most to do with our students have been cut by almost 50 percent in proposals made by the administration.

Moreover, we think that urgent national priorities are served in a less than effective manner in the proposals that have been made. We are concerned really in three different areas of activity.

First of all, we believe that for a number of reasons it is time to do no less than maintain present effort with regard to financial aid for undergraduate students but also that there are substantial arguments for increasing assistance in certain areas.

We are concerned about the shift of priority from the assisting programs that have served various populations well to propose new programs that are by and large untested.

We are concerned about the backing away from targeted programs such as TRIO that have been effective in proving opportunity.

Ultimately in the manpower and strategic areas, we feel concerned about the apparent entrenchment of self-help programs such as the MBSL programs, the student work-study programs that have historically provided ways in which students can contribute in meaningful ways to their own education.

A secondary concern for us has to do with graduate education. The existing authorizations for the Javits and Paris and Byrd programs address specific areas of manpower need that can be enhanced through

Federal action through financial address to graduate students. Each of the programs has its own proper place in national policy as is clear from the existence of the authorization itself.

A lack of administrative commitment to those programs, the lack of a commitment in the budget proposals to enhancing those programs, to funding those that are not currently funded concerns us because we believe that those actions or lack of action represent something like a gap in the national wheel.

A final area of concern that touches all of higher education is that there are large priorities related in general to student financial aid that are not served in the budget proposals that have come before Congress to this point. Federal involvement in financial programs that improve foreign language education, in programs that provide for enhancement of facilities, in programs that provide assistance to developing institutions seems to us to be a cornerstone of national policy as articulated in the past by the Congress. We believe, too, that the prior investments in these areas have proved to be amply worthwhile for the Congress.

Fundamentally, our appeal to you is simply that we believe that the Federal commitment to student financial aid both generally and in aid targeted to needy students, for students preparing for certain occupations, to other groups, that that kind of aid has served us well in the past.

PREPARED STATEMENT

We believe that the rationale for cutting it has not been established, and we appeal to the Congress to restore the aid cuts that have been proposed so far.

[The statement follows:]

STATEMENT OF DR. JOHN CASTEEN

Thank you for this opportunity to present recommendations on FY 1988 appropriations for the Education Department, on behalf of the national higher education associations listed on this testimony.

The programs of particular concern to higher education are placed at risk by the Administration's budget, which would cut them almost 50 percent overall and target many of them for elimination. In view of the critical importance of developing America's human resources to increase its international competitiveness, we urge significant real increases for priority programs such as student aid, and maintenance of current service levels for education programs generally.

Top Priority: Student Aid

Our highest priority is to reaffirm the national commitment to postsecondary opportunities. This commitment is embodied in the primary federal responsibility for student assistance. Federal programs provide 75 percent of total national expenditures for student assistance, including the value of loans insured.

Unfortunately, the national goal of equal educational opportunity has not yet been achieved. Low-income, high-ability high school graduates are still significantly less likely to attend college than their high-income, high-ability classmates. There is an urgent need for more grant and work-study funds to encourage able needy students to pursue postsecondary education, and to minimize student debt.

Grant and work-study awards have not kept pace with inflation since 1980, and students who previously did not borrow have increasingly come to rely on loans to finance their education: loans now represent over two-thirds of federal need-based aid, compared with 17 percent a decade ago. In contrast, the Pell Grant maximum has declined 12 percent in constant dollars since 1980 while the Consumer Price Index increased 37 percent. Appropriations for Supplemental Grants and College Work-Study have declined 20 percent in constant dollars.

The federal grant programs, Pell and SEOG, require significant funding increases if the growing imbalance between grant and loan assistance is to be corrected. And Work-Study needs additional funding--not elimination as proposed by the Administration--if the time-honored principle of working to help meet college expenses is to be maintained.

Pell Grants: We urge the Subcommittee to increase the Pell Grant maximum to the authorized level of $2,500, which the Congressional Budget Office estimates would take a $4.9 billion appropriation, $1 billion over the FY 1987 level (including supplemental). This would provide the neediest students with a meaningful increase in the maximum, which has been at $2,100 since FY 1985 while college costs have risen over ten percent. At the same time, the proposed funding level would implement the provisions of the 1986 reauthorization which increase benefits for students from low- and middle-income families. Implementing these provisions will cost approximately $500 million, but will provide no additional benefits for the neediest students unless the maximum award is raised.

Supplemental Grants: We recommend that the appropriation for Supplemental Grants be increased to $550 million from the FY 1987 level of $412.5 million. The SEOG program is particularly important for needy students attending higher-priced public and independent institutions, where the Pell Grant covers less than one-quarter of total costs.

College Work-Study: We recommend an increase to $700 million from the FY 1978 level of $592.5 million. Such an increase would encourage students to meet their educational costs through work, and help reduce their reliance on debt. Institutional requests for Work-Study funding totalled almost $1.5 billion in FY 1986.

Perkins (Direct) Loans: We recommend an increase to $210 million for this important program which provides low-interest loans for exceptionally needy students. The increase would provide for inflation, restoration of the $5 million taken out of the program last year to fund the Income Contingent Loan experiment, and provision of an additional $5 million assuming Congress desires to continue the experiment. (However, we want to make clear that we oppose the Administration's request to expand the experiment before any results are available.)

State Student Incentive Grants: We recommend an inflation increase for this program. At least 12 states rely on federal SSIG matching for up to 50 percent of their total student aid funding.

Byrd Honors Scholarship Program: We recommend $10 million for this program, established last year to recognize high school graduates of outstanding academic promise.

Special Programs for the Disadvantaged (TRIO): We recommend an increase to $210 million from the current $176 million for this priority program which is of proven value in encouraging the participation and retention of diasadvantaged youth in college. The several programs which make up TRIO--Upward Bound, Talent Search, Special Services, Educational Opportunity Centers, and staff training grants--have eroded in value in recent years due to increased costs. The Administration seeks to cut TRIO in half; it should be increased to provide wider access to its services.

To provide a further incentive for college retention, we ask $5 million to implement the new Title IV authority for special child care services for disadvantaged students.

Graduate Fellowships: We recommend that the appropriation for Title IX be increased to $53 million: $25 million for an expanded round of Patricia Roberts Harris (formerly GPOP and Public Service) Fellowships to broaden graduate opportunities for women and minorities; $8 million for a full round of Jacob K. Javits Fellowships for students of superior ability in the arts, humanities, and social sciences; $15 million to implement the new program for Graduate Assistance in Areas of National Need; and $5 million for the new Grants to Encourage Minority Participation.

Other Priorities

The categorical programs of the Higher Education Act provide important assistance to strengthen educational quality, and for other national purposes. We urge their continuation with increases to maintain their program effectiveness against inflation. For several programs of special priority, we recommend increases over inflation:

Facilities: We appreciate the Subcommittee's recognition of the serious needs for academic and laboratory facilities on campuses throughout the nation, by including funding in the FY 1987 Supplemental to establish the newly-authorized College Construction Loan Insurance Association (CLIA). We have high hopes that this entity will become a major source of assistance for institutions seeking to finance needed facilities, by insuring and refinancing construction bonds and other obligations.

For FY 1988, we ask that the Subcommittee provide $100 million for academic facilities grants under Title VII, to open the program on a competitive basis to all institutions with facilities needs. The dimensions of the problem are such that the benefits of the program should not be limited to a few earmarked grants for specific institutions. In addition, we ask that revolving funds from the College Housing Loan program continue to be made available for new commitments.

Languages: Growing concern with strengthening America's international competitiveness has brought a recognition of the need to increase our efforts to understand other languages and cultures. Title VI was reauthorized and amended last year to provide new impetus for language and area studies, including new authorities for business and international education programs and for the acquisition of periodicals of scholarly importance published outside the United States. To carry out this national priority, we ask that funding for Title VI be increased from the current $26.6 million to $40 million.

Developing Institutions: Last year's HEA reauthorization also made important improvements in the series of programs designed to strengthen developing institutions, and particularly to assist the specific developmental needs of historically Black colleges and universities and other institutions with large concentrations of minority, low-income students. We recommend that appropriations for Title III be increased to $200 million to implement these changes and address growing concerns that the educational system is failing to prepare adequate numbers of minority youths for careers in the sciences, teaching, and other professions.

Partnerships for Economic Development: Particularly relevant to the issue of economic competitiveness is the expanded authority for Title XI in the reauthorized Higher Education Act. We ask for an appropriation of $10 million to implement this authority, which would encourage more systematic cooperation between postsecondary institutions and state and local governments, labor, business, industry, and community organizations for local and regional economic development.

Programs for Non-Traditional Students: The HEA reauthorization substantially revised Title I to relate postsecondary resources more closely to the continuing needs of the American work force, particularly workers dislocated by technological and economic change or seeking to reenter the labor force. We ask $10 million to implement this potentially significant new strategy for increasing the nation's competitiveness.

In addition, we recommend current service levels for two other Education Department programs of interest to higher education: the Carl D. Perkins Vocational Education Act and the Womens Educational Equity Act. The following chart summarizes our recommendations for HEA programs:

STUDENT AID	FY 87	Higher Educ Recs
Pell Grants	$3.862 B*	$4.900 B
SEOG	412.5 M	550 M
CWS	592.5 M	700 M
Perkins Loans (FCC)	188 M	210 M
SSIG	76 M	81 M
Child Care Services	0	5 M
TRIO	176.3 M	210 M
Merit Fellowships	8 M	10 M
Title IX Fellowships	19 M*	53 M
CATEGORICAL SUPPORT		
Title I	0	10 M
Title II	7 M	8 M
Title III	146 M	200 M
Title IV (VCOI)	3 M	3 M
Title V	19 M	20 M
Title VI	27 M	40 M
Title VII	20 M*	100 M
Title VIII	14 M	15 M
Title IX (CLEO, LSCE)	3 M	3 M
Title X	12 M	14 M
X-B (MISIP)	5 M	5 M
Title XI	0	10 M

(* assumes FY 1987 supplemental)

Senator HARKIN. Thank you very much, Dr. Casteen.

Senator Weicker.

Senator WEICKER. You touched upon an issue here very, very briefly, but I just want to expand upon it for a minute. There have been several well-researched, well-presented articles indicating a trend that I consider to be very distressing and upsetting in the sense that there seem to be fewer and fewer minority students caring to go to college. Indications are that the shift from grants to loans might be one of the reasons for this. Their willingness to incur large indebtedness to seek something is a hard row to hoe.

I would like to have your comment on that, if I might, because, believe me, this has been very cavalierly disposed of. Mr. Bennett and everybody else just sort of throws it out.

Dr. CASTEEN. I should say, Senator, I think the Secretary's arguments deal primarily with conditions of upper and middle class families that have financial options that are not available to the neediest families.

We had last year at the University of Connecticut 1,800 students who received Pell grants. The diminishing level of eligibility because of the changed criteria this year has cut 400 from the roster of eligible students, so this year we have 1,400 as opposed to 1,800.

Moreover, we have not improved our collection rate. Under the formula that has been used to determine how much new Federal money comes in, the institution is penalized for having done that. Last year we had $84,000 in new Federal contributions for the Pell program. This year we have $1 million in new Federal contributions for the Pell program.

The remaining money available to provide the form of aid that is of greatest use to our neediest students is from our improved record in collecting and our improved record with regard to the defaults.

There are other ways to measure the impact on the least able students. I doubt very seriously that many poor students choose not to go to college or choose not to pursue an education in a more challenging institution. Rather, I think that the diminishing amount of Federal aid available, the appearance that the system has become increasingly byzantine in its administrative structure and the difficulty in getting timely information about what is available and where it is available and under what conditions create barriers to choice that keep people from ever coming to the point of making that choice.

There are other indices that I think should concern this Nation. My current institution and my previous institution both struggled with the fact that the average incomes of our families of enrolled students increased at a rate far faster than in the national rate of inflation. We took that to be evidence that the neediest families were increasingly finding it not possible to place those students at the flagship State institutions that historically have provided a major ingredient in the policy of equalizing opportunity through higher education.

These States have attempted to meet some of the need. Connecticut this year is in the process of appropriating about $7 million in new

State aid for students from within the State, but the lost aid frankly always exceeds the available new aid from State sources.

We are currently raising tuition on a formula that puts about two-thirds of each increased dollar into financial aid as a way of attempting to protect students by institutional means, but the need simply exceeds the capacity, especially when you look at what happens to students whose families are the poorest, which in Connecticut happens to mean inner city families and the families from the most rural parts of the State.

It happens also to touch blue collar families all over the State because the rate of inflation in their family incomes is somewhat lower than the rate of inflation in the white collar family incomes.

Senator WEICKER. One last question. I realize this does not impact on your institution, but obviously you are well aware of what is going on in many other institutions in the State. If this type of a trend is noticed by you at the University of Connecticut, then what is happening to places like Yale where the cost is much, much greater to the students? Does that put more of a pressure on UConn and the community colleges?

Dr. CASTEEN. In the case of Yale and other institutions like Yale, the institution's willingness to go into its own resources to an extent that far exceeds sound public policy, that is they have been willing to give up more of their own resources than they ought to be asked to.

The national interest has to some extent protected students. On the other hand, one has to be concerned with the student who never considers Yale or Wesleyan or Trinity because of the appearance that the cost is beyond reach, and that student is likely to be the youngster whose parents did not go to college, the youngster who has the least in the way of material wealth in the first place and who consequently, whether you measure it empirically or in other ways would benefit the most by attending, the most demanding, the most selective, the most productive kind of college available to that student.

I think we have gotten into a kind of national bind where the policy of the last several years of backing away from aid to the neediest student has now become itself a major barrier to choice for those students.

Senator WEICKER. Thank you very much, doctor.

Senator HARKIN. Dr. Casteen, that is one element in the choice. How about another element of the choice, the fact that we are moving more and more toward loans, guaranteed loans which are now near market rates? How is this affecting career choices made by students? Do we have any kind of empirical evidence as to what has happened in the last 2 years?

Dr. CASTEEN. I think there is fairly good evidence that as students become more and more dependent on loans they are less and less likely to pursue what you might call the altruistic professions; that is to say, we have ample evidence to show that large numbers of Americans who are academically qualified to go on into graduate work and study physics or other disciplines that do not produce an early reward in terms of large incomes, that those people are moving away from those disciplines.

Their patterns of involvement in graduate school show very clearly the difficulty we have in attracting American graduate students to many of the most productive disciplines in terms of social benefit and a consequent missing of our students in disciplines where early term earnings tend to be relatively high.

Our MBA programs, for example, are fully enrolled. The school of law is fully enrolled and has been overenrolled for quite some time. Yet, we face the problem that we have excess capacity with regard to educating Ph.D.'s and disciplines that are critical to our national security and our national future in physics and so on. I think that is one effect.

Another effect may well be that students who finish the collegiate years with a high burden of debt are less likely to pursue graduate education no matter what the discipline. In our time, I think, debt of the kind that we mastered was manageable in terms of moving from undergraduate to graduate school. I did it. I suspect others here did it. I doubt that that is true now.

The accumulation of the interest at market rates is vastly greater than anything I faced as a student, and the mechanism that served me fairly well has become structurally unavailable to students whose families cannot buy down the interest, who cannot defer the interest in the ways that we used to and who do not benefit by the 3- and 4-percent rates that used to be effective like in the marketplace.

We are placing the kinds of education that are in the long run most important to the Nation out of the means of students who are eligible, able, and prepared to do the work if we stop pricing as we do.

Senator HARKIN. Dr. Casteen, thank you very much for your statement.

STATEMENT OF SHIRLEY OLSON, NATIONAL MILITARY FAMILY ASSOCIATION

Senator HARKIN. Next I would call on Shirley Olson of the National Military Family Association.

Ms. OLSON. Thank you very much for allowing me to testify on behalf of the military family.

The intent of Public Law 81–874 is to provide financial assistance to those local educational agencies upon which the United States has placed financial burden. The presence of the Federal activity not only increases enrollment in education costs but also reduces the local tax base.

Due to provisions granted to military members through the Soldiers' and Sailors Relief Act, revenues derived from some sales tax is also lost.

The entire Impact Aid Program for military children is addressed in my prepared statement. Today, however, I wish to concentrate solely on category "B's." Of the 2,600 school districts receiving impact aid, 1,330 of them serve military children. Of the 550,000 military children, 318,000 are category "B." Currently these military "B's" comprise only 15 percent of the total B students receiving impact aid funding.

Two-thirds of the active duty force live off base in the local civilian communities. When the local civilian school district loses category "B" funds, the education of all students, civilian, and military, suffers.

For example, in the Groton, CT, public schools the 1986–87 per pupil cost was $4,569. The category "B" payment was only $367 per pupil.

The Douglas school system in South Dakota experiences a shortfall of about $1,000 for every "B" student.

If the "B" funds were eliminated from the Daleville City, AL, School District, which is 69 percent "B" impacted, it would lose about 5.5 percent of its total operating budget.

In San Diego County, CA, the school district receives $459 for each student residing on base. They receive $24.89 for each student living off base in the civilian community. The cost to the school district for educating each of these children is the same. Is it fair to ask the local communities to make up the shortfall and strain military/civilian relations when this funding is a Federal obligation?

PREPARED STATEMENT

The National Military Family Association strongly supports the full funding of military "B's" in the Impact Aid Program. Thank you.

Senator HARKIN. Thank you very much, Ms. Olson. I have no questions, but thank you for your statement.

[The statement follows:]

STATEMENT OF SHIRLEY OLSON

The National Military Family Association (NMFA) is a volunteer, non-profit organization composed of members from the seven uniformed services, active duty, retired and their family members and survivors. NMFA is the only national organization whose sole focus is the military family and whose goal is to influence the development and implementation of policies which will improve the lives of those family members. NMFA welcomes this opportunity to express our views on Impact Aid. Twenty-six hundred school districts receive Impact Aid. Of these, 1330 serve military dependents. A total of 550,300 military children are educated in these districts.

Impact Aid was designed to ensure the free public education for military dependents. As Impact Aid has expanded, support for the education of military students has been reduced.

1951 - PL 87-874 implemented the support of education for military children

1953 - The Law was expanded to include Civil Service personnel.

1958 - The Law was expanded to include Indian students who were transferred from the Department of Interior.

1976 - The Law was expanded to include low rent housing students.

CURRENTLY, MILITARY CHILDREN COMPRISE ONLY TWENTY-SEVEN PERCENT OF THE TOTAL STUDENTS SERVED UNDER IMPACT AID.

Congressional authorization and appropriation for Impact Aid have not kept pace with increased program costs (see enclosures). As a result, many school districts are experiencing difficulties in financing even *basic* *education programs. Frequent transfers, temporary duty assignments and the disruption of the military family unit often create a need for special programs and additional services. This need places an added burden on these districts trying to provide a comparable education for their students. The unique characteristics of the military family and the special educational needs of their dependents may force a district to have to choose between:*

1. *Providing programs and services for special needs and as a result DILUTING THE BASIC INSTRUCTIONAL PROGRAM FOR ALL STUDENTS.*

2. *Not providing programs and services for special needs and consequently FAILING TO PROVIDE AN ACCEPTABLE EDUCATIONAL PROGRAM.*

Is it fair to ask these districts to develop an expenditure budget without the assurance that sufficient revenue will be available to meet these obligations?

Another area of concern to NMFA is Category-B funding. The inclusion of military-A children in the Impact Aid program has been accepted by the Administration and the Congress. NMFA realizes that the necessity for funding military-A children is a priority. However, funding for Category-B has been repeatedly eliminated from the President's budget. NMFA strongly urges that funding be provided for military-B students.

As stated in PL 87-874:

> *"Congress hereby declares it to be the policy of the United States to provide financial assistance for those local educational agencies upon which the United States has placed financial burden..."*

The impact that the military-B student places on the school districts is unique. The presence of military activity not only increases enrollment and educational costs, but also reduces state and local tax revenues by:

- *removal of property from tax rolls*
- *loss of personal tax revenues through the Soldiers and Sailors Relief Act*
- *loss of some sales tax*
- *loss of property tax from business and industry.*

CURRENTLY, MILITARY CHILDREN COMPRISE ONLY FIFTEEN PERCENT OF THE TOTAL STUDENTS RECEIVING CATETORY-B FUNDING.

In summary, NMFA supports the continuation of the Impact Aid program in recognition of the federal government's obligation to the school districts that educate military children. NMFA also supports the funding of Category-B military children, recognizing the unique burden they place on the school districts. However, any B payments must not be at the expense of Category-A funding.

1981

	L.C.R.	*% of payment*	*actual payment*	*original intent of PL 874*
Regular A	*$959*	*85*	*$819*	*$959*
Super A	*959*	*95*	*$911*	*959*
Regular B	*959*	*38**	*$368*	*$479*
Super B	*959*	*38**	*$368*	*479*

** An extra 5% was added at end of 1981.*

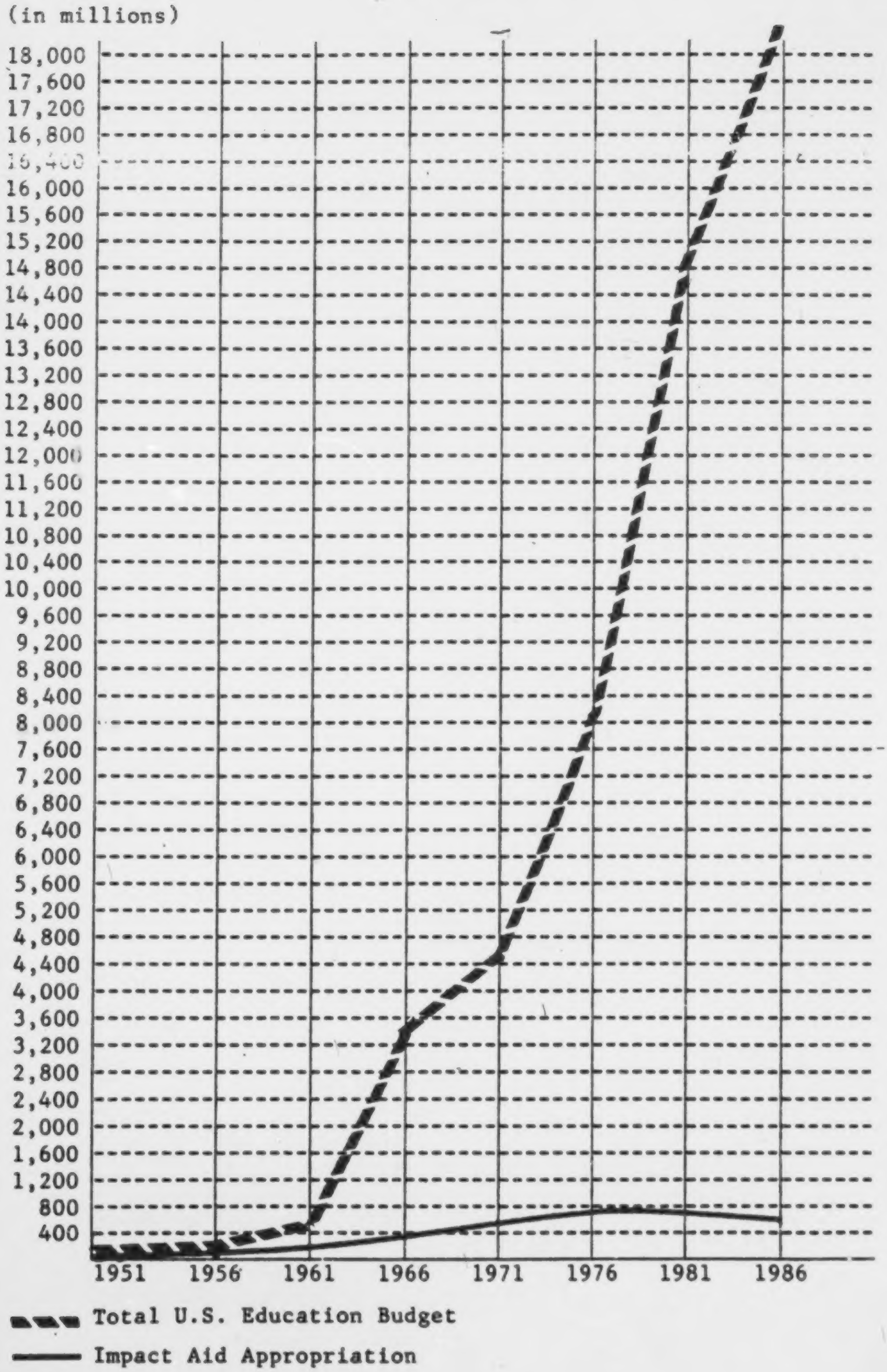
1986

	L.C.R.	*% of payment*	*actual payment*	*original intent of PL 874*
Regular A	*$1550*	*40 of 1985*	*$574*	*$1550*
Super A	*1550*	*95 of 1985*	*$1368*	*1550*
Regular B	*1550*	*9.5 of 1985*	*$ 22*	*$ 775*
Super B	*1550*	*57 of 1985*	*$ 136*	*775*

Source: National Association of Federally Impacted Schools

L.C.R.: Local Contribution Rate

Appropriation for Impact Aid
Compared to U.S. Education Budget
1951-1987



STATEMENT OF LESLIE R. WOLFE, CHAIR, NATIONAL COALITION FOR WOMEN AND GIRLS IN EDUCATION

Senator HARKIN. Next we will turn to Leslie Wolfe, chair of the National Coalition for Women and Girls in Education. Welcome. Your testimony will be made a part of the record.

Ms. WOLFE. I will try to be very brief.

My coalition represents more than 60 national organizations in addition to those listed on the front. There are several that have already appeared before you today: The National Education Association, the American Council on Education, the Chief State School Officers, and many others. We come together in this coalition because we share a common goal which is to protect and strengthen opportunities for women and girls in education.

To that end, the Women's Educational Equity Act has been a top priority for the coalition almost since it was first enacted in 1974. As you know, the Congress is currently considering reauthorization of that. For the third time, the House Education and Labor Committee has just voted to extend the program and increase its authorization level to $20 million.

However, this program has barely survived the last few years largely because the administration has attempted to eliminate the Women's Educational Equity Act since 1981. It has failed to do so largely because Members of Congress have understood the importance of this small but cost-effective program and, therefore, have continued to appropriate funds for it.

For this reason, I must tell you that the members of the coalition were disturbed and somewhat surprised last year to discover that this committee had voted only $1 million for the program in 1987, which would have been a decrease of 83 percent and would have amounted to the virtual elimination of the program. The committee report referred to the appropriation as part of a phaseout of the Women's Educational Equity Act.

The final appropriation was somewhat higher, $3.5 million, but the cut is still devastating for a program that has already been cut by 40 percent since 1981.

The Education Department encouraged this decision to phase out WEEA and produced an evaluation of the program that suggests that the Women's Education Equity Act is no longer needed. We challenge this assessment based upon our experience with the program in the past and the flaws in that report itself, and my testimony does speak about the report, that evaluation report at some length. I would certainly be willing to do a much more detailed analysis of it if the committee felt they needed it.

This evaluation report from the Department is seriously flawed. It provides no evidence, statistical, anecdotal, or otherwise, to support its contention that basically educational equity has already been achieved in the United States.

The report suggests that the overbarriers to participation by women have basically been eliminated at all educational levels and that the barriers remaining are less tangible and, as the report says, culturally based. However, the report doesn't acknowledge that frequently these less tangible barriers are the most difficult to overcome.

The report also claims, incorrectly we believe, that WEEA duplicates other Federal programs, that many of its projects are local, not national, that there have not been evaluations of the WEEA Program, and that no new issue areas are emerging. Again, my testimony responds at some length to each of these incorrect statements.

I would just like to say one thing as my time is running out, and that is that the idea that WEEA duplicates other programs and that other Federal funding can and is provided for women's educational equity is just unfortunately not correct. There isn't another program similar to WEEA. WEEA is the only one mandated to address sex equity throughout the entire education system. It is the only program mandated to produce models that can be replicated nationwide without being direct service projects, and it is the only one with a particular focus on the educational needs of women and girls with disabilities and women and girls who come from minority groups.

As an example, the Clark Perkins Vocational Education Act which we avidly support does provide for direct service to women in vocational education. What we have found since the Perkins Act passed is that the WEEA publishing center which produces the materials developed by grantees under the Women's Educational Equity Act is reporting that sales to vocational programs have increased substantially, which basically means that there is a complementary relationship between WEEA and the Vocational Education Act.

To the extent that vocational programs now seek to serve women and girls, they are looking for models to do, and the Women's Educational Equity Act has developed those models.

I can go on for many hours about this program, as you may know.

[The statement follows:]

STATEMENT OF LESLIE R. WOLFE

Chairman Chiles and members of the Subcommittee, I am Leslie Wolfe and I am here today in my capacity as Chair of the National Coalition for Women and Girls in Education. The Coalition is composed of some 60 national organizations representing a broad-based constituency that includes women's organizations, civil rights organizations, and education associations. These groups share a common goal--to protect and strengthen opportunities for women and girls in education.

The Women's Educational Equity Act program is a top priority for the Coalition. The Women's Educational Equity Act was first passed in 1974 because Congress found that education in this country was "frequently inequitable" for women and girls, and that this inequity limited their "full participation" in American life. The Act established a program of grants and contracts to support projects which promote quality education for women and girls at all levels. The Congress currently is considering reauthorization of the Act for the third time--the House Education and Labor Committee has just voted to extend the program and increase its authorization level to $20 million.

This program has barely survived--largely because the Executive Branch has attempted to eliminate WEEA since 1981. It has failed to do so largely because members of Congress have understood the importance of this small but cost-effective program and therefore have continued to appropriate funds for it. Therefore, members of the Coalition were disturbed--and surprised--to discover that this Committee had voted only $1 million for the program in 1987--a decrease of 83 percent, which would have amounted to the virtual elimination of the program. In fact, the committee report referred to this appropriation as part of a "phase-out" of the Women's Educational Equity Act. Although the final appropriation was somewhat higher--$3.5 million--the cut is still devastating for a program that had already been cut by 40 percent since 1981.

The Education Department supported this decision to "phase-out" WEEA and produced an evaluation of WEEA that suggests that WEEA is no longer needed. According to the report, "overt barriers to participation have basically been eliminated at all educational levels; the barriers remaining are less tangible and are often culturally based." We believe that this report is seriously flawed; it offers no evidence--statistical, anecdotal or otherwise--that educational equity has been achieved in the United States. On the other hand, it ignores the considerable body of statistical and research evidence that sex discrimination persists. The report also claims--incorrectly, we believe--that WEEA duplicates other Federal programs; that many projects have only local, not national, impact; that there have been no rigorous evaluations of the effectiveness of WEEA products; and that no new issue areas are emerging. I would like to respond briefly to these criticisms.

First, WEEA does not duplicate any other Federal programs. Indeed, there are no other federal programs that are similar to WEEA. The report repeats the Administration's earlier budget documents, suggesting that WEEA activities can be funded under Chapter II, the Education for Economic Security Act, the National Endowment for the Humanities, the National Institute for Education, the Fund for the Improvement of Postsecondary Education and the Carl Perkins Vocational Education Act. In fact, the Carl Perkins Vocational Education Act and Title IV of the Civil Rights Act are the only other statutes that actually require the use of federal funds for sex equity; Title IV funds provide for technical assistance to school districts only, while Perkins Act funds are limited to vocational education programs and are primarily directed at single parents and displaced homemakers. WEEA, in contrast, is mandated to address sex equity throughout the entire educational system, from pre-school to graduate school; and WEEA funds model projects covering a comprehensive range of subject and curricular areas. Unlike

WEEA, the Perkins Act is designed to provide direct services to women and girls, while WEEA develops and disseminates model programs that can be implemented in a variety of settings nationwide. The WEEA Publishing Center--which publishes and distributes many WEEA products--reports that sales to vocational programs have increased since the passage of the Carl Perkins Act. Indeed, Perkins Act funds have given schools the ability to use the WEEA-developed models and to incorporate them into existing vocational and technical programs. Rather than duplicating each other, these two federal programs complement each other, as WEEA develops the models for states to use in spending their Perkins funds for women's programs. With regard to the other statutes, it is clear that funds provided by the Education for Economic Security Act have not been used for sex equity, these funds are so sparsely spread across the 16,000-plus school districts that many school districts do not receive enough money to develop any kind of effective program. Without specific requirements from the Education Department, these limited funds are unlikely to be used for sex equity programs. Finally, we know that states rarely spend their Chapter II money on equity activities. For the most part, the states still rely on Women's Educational Equity Act and Title IV monies to develop and run equity programs at the state level. Indeed, recent evidence suggests that, if these funds are cut or eliminated, states will not replace them. For a March 1987 study, *The Second Wave: State Title IX Laws and the New Federalism,* Phyllis Cheng interviewed state education department employees in 12 states that have state Title IX laws--laws modeled after the federal law banning sex discrimination in education. Two-thirds of these 12 states, which have expressed support for sex equity, reported that they have not replaced the federal sex equity funds cut under the Education Consolidation and Improvement Act in 1981. Two-thirds also report that the number and types of sex equity programs in states have decreased. "Many cited the disappearance of Title IV funding for local education agencies and training institutes, as well as smaller and shorter term grants and contracts under Title IV and WEEA," the report said. If remaining federal funds were eliminated, three-quarters (74 percent) of the states said that they believe that the number and types of sex equity programs in the states would be drastically decreased or eliminated.

2. Although many WEEA projects may have a local component, all must produce a model which can be replicated nationally or regionally. It is perfectly acceptable to operate a program with a service component as long as a replicable model product is produced. Recipients of WEEA grants are selected by the Department of Education in accordance with detailed regulations that require funding of projects with "national, general, or statewide significance." If the report were justified in alleging that WEEA projects are too "local," I suggest that we must look at the funding decisions made within the Department to determine whether the regulations are, in fact, being implemented. In 1980, one of the main criticisms of the WEEA program made by the new Administration was that it funded too many national organizations and that there was not enough geographic diversity among grantees. At that time, concern was expressed that not enough money flowed to local organizations for local projects. Now, as a result of administration policies, fewer national organizations are receiving funds and projects are spread in more states. In 1986, 41 states, Puerto Rico and the District of Columbia all had at least one WEEA grant--most (63 percent) went to state or local education agencies. Perhaps the Education Department, in its effort to increase local funding and geographic diversity, has neglected the statutory and regulatory requirements of WEEA and has therefore failed to ensure that all programs do produce replicable models. If this is happening, the Education Department must take steps to correct their errors; eliminating the entire WEEA program is not the solution.

It is more likely that what looks like local direct service at first glance is actually the field test for a national or regional model. A good example of a local project producing a national product is the "Positive Images of Disabled Women" project of the New York City YWCA. YWCA staff member Linda J. Nessel described her project in a letter: "This highly successful model project seeks to enhance the occupational, educational and social aspirations of disabled girls by linking them with successful women with disabilities as role models. This Project has helped the girls, their parents, and the mentors and has increased the awareness of mainstream projects of the needs and abilities of women with disabilities. The project has been widely reported in the media and we are currently replicating it around the country."

3. There have been evaluations of the WEEA program in the past. In 1977 and 1979, Office of Education-funded evaluation studies reviewed the WEEA grantmaking process itself and surveyed project directors to gain information about their problems and successes. In 1981, the American Institutes for Research (AIR) conducted another Education Department-funded evaluation study which concluded that "there is a continuing need for positive evaluation data on WEEA products." The report also noted that "few developers are fully aware of rigorous evaluation procedures or how to evaluate the impact or potential impact of their products." Clearly, WEEA should be placing more emphasis on evaluation of projects' effectiveness; project directors need additional training and technical assistance, as well as funding, to ensure that reliable evaluations are conducted. However, even without technically rigorous evaluation data, we know that WEEA products are being used and are in demand. The WEEA Publishing Center has sold over $900,000 in products since it began. Because of new Department of Education dissemination policies, the Center has published no new WEEA products since May 1984. But even during that time, sales of existing products have

doubled. Nearly one-half of WEEA products are sold to elementary and secondary schools, about 30 percent to colleges and universities, including community colleges, and about 20 percent to community based organizations, state and federal agencies, and business and industry. Further, some "classic" WEEA publications are being used by new audiences; for example, the Single Mothers Resource Handbook--which was originally designed for Head Start mothers--is now being used by new teen parenting programs and life skills classes. The state education department in Louisiana is developing a first state-wide collaboration dealing with adolescent programs and is incorporating WEEA models.

4. New WEEA funding areas are constantly emerging. When WEEA was first authorized in 1974, math, science and computer literacy had not surfaced as major concerns. When the decline in quality in mathematics and science education became an issue, along with the rise of interest in school computer use, WEEA became one of the first sources of funding for pioneering programs aimed at increasing the access of young girls and women to mathematics, science and computer education. There is currently great concern about teen pregnancy and high school dropouts in the education community and the community at large. At least 12 of the 65 grantees in 1986 received grants focused on these areas. Applied Systems Institute's suggestion, in its 1985 report, that "no new areas of work are appearing," is not borne out by the facts. We know that there is a great need for more teacher guides, textbooks, and audiovisual materials for use in the classroom, especially at the middle school level. The National Women's History Week Project--also funded by WEEA--has uncovered a tremendous demand for more curriculum materials on the historical contributions of women, particularly women of color, in the United States and the world. Materials promoting voluntary compliance with both the letter and the spirit of Title IX are in demand, as are programs designed to assist educational

leaders to ensure that hiring, promotion, and compensation of teachers and administrators are conducted in a non-discriminatory manner. In addition, many materials developed in the early years of WEEA are--as is the case with all educational materials--becoming obsolete; these must be revised or replaced with new products appropriate for the 1980s and 1990s.

It would be impossible to expect that ten years of WEEA could complete the work mandated by its statute--"to provide educational equity for women in the United States." Much remains to be done. The National Coalition for Women and Girls in Education strongly recommends that you restore WEEA to at least its 1986 funding level, to allow educators and advocates throughout the country to continue this important work.

Senator HARKIN. What you're asking is that the funding be at the 1986 level, is that right?

Ms. WOLFE. Yes; at the very least, to restore it to the $6 million in 1986 which, as you may know, was a substantial cut.

Senator HARKIN. What was it last year?

Ms. WOLFE. $3.5 million in 1987. In 1980 before this administration came in it was $10 million, and the previous administration had requested $20 million for 1981, a bit of history most people do not remember.

Senator HARKIN. Thank you very much. We appreciate your testimony.

Ms. WOLFE. Thank you.

Senator HARKIN. I would next call on Mrs. Anne Richardson, chairman of the board of Reading is Fundamental, Inc.

STATEMENT OF ANNE RICHARDSON, CHAIRMAN OF THE BOARD, READING IS FUNDAMENTAL, INC.

Ms. RICHARDSON. Thank you, Mr. Chairman. Greetings from Reading is Fundamental, and thank you for the opportunity to testify. RIF operates this program under contract with the Department of Education. Congress and especially this subcommittee has enabled the program to reach children in 10,000 locations throughout 50 States, the District of Columbia, and the offshore possessions. The young people in these projects will grow up reading.

The Book Program creates an atmosphere that inspires children to want to read thus to choose books that appeal to them to take home, keep, and read. The most frequently reported results are children reading more, improved reading skills and attitudes toward reading and learning, increased parental involvement in children's reading, and increased library circulation.

The Department of Education proposes to fund the Book Program at approximately the 1987 level in fiscal year 1988. Reading is Fundamental respectfully urges Congress to assure adequate funding for this highly successful program by specifying that fiscal year 1988 appropriation of $8.2 million to maintain the Book Program at the current services level.

The increased funding is needed to keep pace with rising book costs. The program presently serves over 2 million children with nearly 7 million books a year. Level funding in fiscal year 1987 appropriations level of $7.8 million would result in our ceasing to serve about 100,000 children; $8.2 million will not, of course, meet the urgent demands of the program, but it could easily reach at least 700,000 more children per year were the money available.

It is clearer than ever that our children simply must grow up reading. The Book Program is an important step in that direction. Eighty-six thousand volunteers run the local projects. Since 1966, they have brought more than 72 million books to America's children. Major reading studies all underscore the importance of motivation of books in the home, parent involvement, reading often, and for pleasure and easy access to a wide range of books.

The Book Program provides all of these. The most cost-effective way to eliminate illiteracy is to prevent it by reaching children. This program costs the Government $3.36 a year per child in Federal funds. RIF brings another $3 in funds and services for each Federal dollar. Through the Book Program, Congress provides communities with an effective and appealing way to help children growing up reading.

The program's methods are simple, its results profound. The Inexpensive Book Distribution Program offers communities a low cost, effective way to prevent illiteracy by getting children to read.

PREPARED STATEMENT

Reading is Fundamental respectfully requests the Congress to reiterate the mandate for the Book Program and specify a fiscal year 1988 appropriation of $8.2 million for the Inexpensive Book Distribution Program.

[The statement follows:]

STATEMENT OF ANNE RICHARDSON

On behalf of Reading Is Fundamental (RIF), I'd like to thank the members of this Subcommittee for the opportunity to testify on the Inexpensive Book Distribution Program (IBDP). (Education Consolidation and Improvement Act (ECIA), Chapter II, Subchapter D, Secretary's Discretionary Fund, Section 583(b)(1).)

The Congress established the IBDP in 1976 as part of the Federal effort to increase the reading capabilities of America's young people, modelling it on the demonstrated Reading Is Fundamental method for preventing illiteracy. RIF has operated the IBDP ever since under contract to the government.

Through the years the consistent support of the Congress--and especially of this Subcommittee--has enabled the IBDP to have a significant national impact. The program spans all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands and Guam. Today one in twenty-five preschool through high school aged youngsters benefits from the IBDP. These young people will grow up reading.

They will grow up reading because IBDP projects have created an atmosphere that inspires children to want to read. And they have made it possible for children to choose books that appeal to them--to take home, to keep, and to read--at no cost to them or their families.

For the few dollars a year spent on each child, the IBDP gets remarkable results. A recent survey of the IBDP projects overwhelmingly reaffirmed the effects we have reported to the Congress in past years: children reading more, improved attitudes toward reading and learning, increased parental involvement in children's reading, increased library circulation, and improved reading skills.

READING IS FUNDAMENTAL RECOMMENDS AN FY 1988 APPROPRIATION OF $8.2 MILLION

In its FY 1988 Budget Summary, the Department of Education states its intent to fund the mandated programs at "approximately their 1987 level."

Reading Is Fundamental respectfully urges the Congress to assure adequate funding for the highly successful IBDP by specifying the amount at which it is to be funded, and by reiterating the legislative mandate to the Secretary of Education to fund the program.

We respectfully recommend that Congress specify a Fiscal 1988 appropriation of $8.2 million to maintain the IBDP at its current services level.

The increased funding is needed to keep pace with book costs which continue to rise faster than the general rate of inflation. Recent surveys by the Gallup organization and others indicate that the prices of books rise by 8% to 12% annually.

The IBDP presently serves 2,085,000 children with about 6.6 million books. The Fiscal 1987 appropriation was $7.8 million. We estimate that we could continue to serve approximately this number of children with an appropriation of $8.2 million. Level funding, however, would result in withdrawal of services to about 100,000 children.

THE IBDP ADDRESSES A CRITICAL NATIONAL PROBLEM

The IBDP addresses an issue more and more in the forefront as concern increases over America's competitiveness. There is near-universal agreement that our children simply must grow up reading if they—and the nation--are to reach their full potential.

Yet studies continue to paint a bleak picture of the status of reading in America today. This Subcommittee knows them well, so we cite but a few of the findings:

* Six percent of 9-year-olds cannot follow the most rudimentary reading instruction, putting them in jeopardy of future school failure.
* Forty percent of 14-year-olds and 16 percent of 17-year-olds have not acquired intermediate reading skills.
* Only five percent of students at age 17 have reading skills required for texts used by professional and technical workers.
* Approximately two-thirds of U.S. colleges and universities find it necessary to provide remedial reading and writing courses for students.
* Youngsters with below average reading skills are twice as likely to drop out of school.
* "Over and over again, those of us in the private sector find ourselves struggling to fill entry-level positions, because applicants lack the most basic math and literacy skills," says a spokesman for the national Alliance of Business, referring to the organization's recently-released study "Employment Policies: Looking to the Year 2000."

In short, the studies tell us that America has a costly and discouraging literacy problem, and it is one that reaches down to our children.

THE IBDP GETS CHILDREN TO READ

More encouraging, however, is the story told by those who watch the progress of youngsters who benefit from the IBDP.

"We know for certain that RIF is the most important activity we participate in to promote reading," says a RIF coordinator in West Palm Beach, Fla., noting that for many of the children RIF and the IBDP provide the only books they can call their own." A similar report comes from the Hartford, Ct., program which serves 15,000 children. About 75% of these children fall below the poverty line. The coordinator reports that "without RIF there would be no reading material in their homes."

The IBDP succeeds because it reaches young people directly when their minds are receptive and their taste for reading is most easily cultivated. "Students are super-enthused by RIF books," a Connecticut coordinator observes. "Reading achievement in the East Windsor Schools increased so dramatically that the Hartford Courant did a feature article, (and) the State Reading Consultant visited to see our successful methods and pass them on to communities . . . where reading achievement is low."

It reaches them in more than 10,000 locations, ranging from a migrant worker camp in Sumter County, Fla., to a halfway house in Detroit, from an adolescent hospital in Newton, Ct., to an Indian reservation in the Dakota hills, from a rural schoolhouse in the Kentucky mountains to a community center on Los Angeles' Skid Row.

Whatever the setting, the IBDP is there, with an exciting array of books to please every taste and to start youngsters on the road to becoming lifelong readers. And wherever they are, a grassroots network of local volunteers is creating an environment for literacy.

The IBDP puts into the hands of local people the day-to-day operation of these reading motivation projects. Every important decision--such as which books to order and which children to serve--is made at the local level by RIF's network of 86,000 volunteers (35% are parents of the children served).

In hundreds of ways, these volunteers lead children to successful reading experiences. They organize oral history projects that give youngsters a sense of the past. They look for colorful personalities to dramatize books. They enroll older children, senior citizens, or local celebrities to read aloud to children. And they give young people public recognition for their efforts.

And, of course, through the IBDP, young people come to have books of their own. Since its founding in 1966 RIF has brought more than 78 million books into American homes. Of that number 72 million reached America's children through the IBDP.

So successful has the IBDP been that it has generated a groundswell of demand for its services. Of course, RIF has been unable to fund new programs for lack of monies.

Our mail tells us that with sufficient funds we could easily add as many as 1,000 new programs, reach an additional 550,000 to 700,000 children, each year.

STUDIES/REPORTS SUPPORT THE IBDP METHOD

Recent studies, such as the Department of Education's "What Works," the National Institute of Education's "Becoming a Nation of Readers," and the "Reading Report Card" all underscore the importance of motivation, books in the home, parent involvement, reading often and for pleasure, and easy access to a wide range of books as significant factors in assuring that children become readers.

The IBDP involves all of these factors. The thousands of reports RIF has received through the years from educators, parents, librarians and others who know the IBDP further confirm the studies' findings and point to the success of the IBDP in helping children become readers -- and appreciate the importance of reading.

And so do comments of children, such as the response of a Naples, Fla., first-grader when asked what he would do with his RIF book: "I'm going to teach my parents to read English."

THE IBDP IS LOWCOST AND COST EFFECTIVE

The most cost effective way to eliminate illiteracy is to prevent it -- by reaching the children. Last year the IBDP reached more than 2 million children at the impressively low cost of only $3.36 per child.

And these funds served as leverage to bring in widespread private support. Both RIF and the local projects (which receive Federal funds only to purchase books) have used a self-help approach to tackling the illiteracy program that has multiplied the Federal investment threefold.

Among the multipliers of the Federal funds are: the nearly 5000 workyears of 10.4 million hours donated by RIF's volunteer network since the IBDP began; the major discounts RIF has negotiated on a nationwide scale with 356 book suppliers; the funds, goods and services provided by more than 8,000 local businesses and national corporations; and a variety of privately-funded aids and programs RIF provides to children and local IBDP projects. The latter include an annual nationwide in-home reading campaign for children and workshops and publications for their parents.

Such widespread support for the IBDP has enabled RIF and the local projects to bring in approximately $3 in private funds, goods and services for every $1 of Federal funds appropriated for the IBDP.

In creating and supporting the IBDP, the Congress provided communities with an effective and appealing way to help children grow up reading -- and at negligible cost to the taxpayer. The response from communities and the children have amply justified the Congress' faith in the program.

The IBDP's methods are simple. Its results are profound.

THE INEXPENSIVE BOOK DISTRIBUTION PROGRAM:

- o Succeeds in getting children to read;
- o Is a lowcost and cost effective way to help prevent illiteracy;
- o Addresses a compelling national problem;
- o Offers communities a practical and proven means to become involved in the literacy effort;
- o And is greatly in demand nationwide.

For these reasons,

READING IS FUNDAMENTAL RESPECTFULLY REQUESTS THE CONGRESS to reiterate the mandate to fund the IBDP and to specify a Fiscal 1988 appropriations of $8.2 million for the Inexpensive Book Distribution Program.

Senator HARKIN. Do you contract with the Department of Education?

Ms. RICHARDSON. Yes; the program is operated by contract by Reading is Fundamental. The Inexpensive Book Distribution Program was, in fact, modeled on Reading is Fundamental, which had been working for about 10 years before.

Senator HARKIN. Do you buy new books or used books?

Ms. RICHARDSON. They are not used books. The local projects each choose books to order from the 356 book suppliers that we have contracts with with whom we negotiate major discounts ranging 40 percent. They are paperback books but they are new books.

Senator HARKIN. They go from beginning reading on up?

Ms. RICHARDSON. Well, there are some programs in daycare level but mostly kindergarten through sixth grade. We have programs up through high school, but we stop after that.

The range of books is enormous. It is from baby books up through the classics.

Senator HARKIN. Do you have chapters in all the States?

Ms. RICHARDSON. We do not have State chapters, Mr. Chairman. Partly, we try to avoid layers of bureaucracy.

Senator HARKIN. How do you get around? You say you operate all over the country. How do you do that?

Ms. RICHARDSON. The 86,000 volunteers in the communities each operate their local programs. We do not send Federal funds directly to the programs, but there is a system that we worked out that is both cost effective and failsafe, and that is that they order the books and then they send us the invoice along with their 25 percent share.

They have to raise 25 percent of the book money, and we then check it and make sure it is proper, and then we write a check for the Federal funds, three times their Federal, and send that to the book supplier. So that we, in fact, are their financial office of billpayers and so forth.

Senator HARKIN. Thank you very much, Mrs. Richardson.

Now let me just say I can take two more witnesses and then I am going to have to recess for a brief interim time until Senator Chiles can get back from the floor. He is leading the budget debate.

STATEMENT OF DR. RAY D. RYAN, EXECUTIVE DIRECTOR, NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

ACCOMPANIED BY CHET HANDSON, DEPUTY DIRECTOR

Senator HARKIN. I call Ray D. Ryan, executive director of the National Center for Research in Vocational Education. Your statement will be made a part of the record in its entirety, and if you would summarize it we would appreciate it.

Dr. RYAN. Thank you, Mr. Chairman. I have asked the deputy director of the national center, Dr. Chet Hanson, to join me.

I am very proud to appear before you and the subcommittee, Mr. Chairman. This is my first opportunity to do so. I have been in this position for 3 months at the national center, and prior to that I had a long career in vocational technical education and teacher education and also worked as a researcher or laborer, typesetter, et cetera. I am bringing to the national center perhaps a perspective of a working person hopefully as well as the academic area.

The national center has about 22 years existed and for about 22 years existed at the Ohio State University. It has been serving the field of research and vocational technical education for all of those years.

Recently we have gone through a midpoint review in the contract with the Department of Education, and I would like to just quote from that, that the national center is a mature, capable research institution which is providing taxpayers with full value for their money. It is bringing about true improvement in vocational education. It is with that that we feel quite fortunate to be appearing before you.

I will cut my comments very short and suggest that our research agenda this year is addressing the areas of the changing work force, economic development, and productivity, and it is also dealing with at-risk populations and employability of those at-risk populations within the American economy.

We would encourage you, Mr. Chairman, and your committee to, at least at the minimum levels called for in the act, fund the program improvement, national programs that deal with a comprehensive organization like the national center as well as the National Occupation Information Coordinating Committee and their respective State occupational information coordinating committees around the country. They provide a valuable service to local policy as well as national policy.

In addition, I would encourage that same at least minimum level of funding for the curriculum coordination centers across our country that provide valuable technical assistance to the State and local practitioners within their respective regions and provide dissemination of curriculum information and products.

PREPARED STATEMENT

When I was a State director in Arizona of vocational education I utilized all three of those entities, and I feel that it is safe to say that the vocational entity on a national basis is served well by all three.

With that, I will conclude my comments.

[The statement follows:]

STATEMENT OF DR. RAY D. RYAN

On behalf of the National Center for Research in Vocational Education, as well as the entire vocational education profession, I want to express appreciation to you Chairman Chiles and other members of the subcommittee for your support and assistance in assuring that job training is responsive to the needs of private and public sector business, industry, and government entities. It is indeed an honor to appear before this committee to briefly highlight the accomplishments of the National Center and vocational education made possible through your continued support.

The National Center will have completed its 22d year of providing research and service to the field of vocational education in March 1987. As stated in the recent midpoint review and evaluation coordinated by the U.S. Department of Education, the review panel found the "National Center to be a mature, capable research institution which is providing taxpayers with full value for their money. It is bringing about true improvement in vocational education...."

My testimony I am filing with the committee addresses how the National Center's program improvement activities are supporting the current goals of the reform movement in vocational education and the critical need to fully fund national program improvement programs authorized in the Carl D. Perkins Vocational Education Act of 1984 (hereafter referred to as the Act). The National Center's current year's activities address problems and concerns that are central to accomplishing both social and economic priorities in this country. The Act states as its purpose or goal "to strengthen and expand the economic base of the nation, develop human resources, reduce structural unemployment, increase productivity, and strengthen the nation's defense capabilities." This goal is as pertinent to the human needs and economic problems confronted by this Nation today as it was when the Act was established in 1984.

The National Center's 1987 research and development initiatives are highly pertinent to the priorities in the Act and to the issues concerning the reform of American education being debated nationwide. The concern for improving the United States' competitive economic position in world markets is highly dependent on a productive work force, an economic development program that allows for adaptation to the changing needs of the marketplace, and an educational program that meets the employability training needs of at-risk youth and adults in this nation. The national center's entrepreneurship research and development program is producing products and services that are contributing to these goals. These include projects and products for (1) infusing entrepreneurship into secondary vocational education programs, (2) the development of entrepreneurship training programs for adult students, displaced workers, and job service training providers and (3) designing training opportunities for potential and existing minority entrepreneurs. A National Entrepreneurship Education Consortium involving 27 states has been developed for the purpose of enhancing self-employment training for youth and adults. In addition, the national center has fostered relationships between vocational education and several small business organizations including the International Council on Small Business, the National Federation of Independent Business, the U.S. Small Business Administration, and the Association of Private Enterprise Education. Through these and other efforts, we are confident that vocational education is effectively contributing to selfemployment and job creation in the United States.

For several years the national center has focused on reinforcing basic academic skills and employability skill development as areas of emphasis. One phase of the current year's work has been directed toward the final development and distribution of materials that should allow administrators and school support personnel responsible for vocational education programs to fully meet the needs of students in these critical areas. These materials are based on a synthesis of the national center's and other institutions' research and development relating to basic skills enhancement and the transitions of youth and adults from school to work. The national center is also continuing its work to improve access and equity for target populations such as the handicapped, the disadvantaged, single parents, limited-english speakers, and the incarcerated who can benefit from participation in vocational education programs.

A brief overview of the National Center's functions as specified in the Act includes the following.

Applied Research and Development is concerned with applying research knowledge to the design of programs and materials that assist practitioners in career planning and to the vocational preparation of individuals who are in school, as well as those who are entering or already participating in the work force. Our Research and Development function includes four major priority areas: special populations, private sector involvement, and basic skills. I want to mention four of our many projects as examples.

- Dropout Prevention Strategies Utilizing Vocational Content, Processes, and Programs. The purpose of this project is to increase the holding power of secondary schools. For middle schools, the project is developing a set of research-based materials to help early adolescents analyze personal, social, and academic factors in order to prepare a comprehensive academic and vocational plan for students in their high school years. For high schools the project is investigating the redefinition of secondary vocational education in terms of its role in engaging potential dropouts in meaningful educational experiences, thereby assuring high school completion. The latter effort will include a vocational-academic assistance program model, targeted to a specific number of students, to provide support services throughout their high school years.
- Basic Skills, School-to-Work Transitions, and Postsecondary and Adult Learners. Three packages have been developed for use by teachers, curriculum officers, employers, and others that bring together research and development results from the National Center and elsewhere on three key topics. They are: enhancing basic skills through vocational education, youth transitions from school to work, and programs for postsecondary and adult learners. Using our own and other research and development findings, each package includes an orientation component, a user's implementation guide, and varied printed and mediated materials, such as research summaries, curriculum guides, instructional materials, teaching strategies, and descriptions and simulations of exemplary practices. These materials are currently being utilized in demonstration sites and will be available for broad dissemination in May 1987.
- Models of Effective Career Guidance. The purpose of this study is to identify career guidance program characteristics, approaches, activities, materials, staffing patterns, and evaluation methods that have produced highly positive student outcomes. This field-based project is collecting case study data from 6 model career guidance programs. The study outcomes will assist state and local personnel who are implementing Perkins Act career guidance requirements.
- Vocational Teacher Education. The purpose of this activity is to determine the extent to which beginning secondary vocational education teachers are prepared to integrate basic skills instruction into their classes and to teach students with special needs. The study is collecting data from a national representative sample of 750 teachers, their supervisors, and educators from their teacher education institutions. This effort will assist state and local educational planners who are charged with improving educator preservice and inservice programs.

Leadership Development programs enable vocational educators from the public and private sectors to deal creatively and effectively with significant issues, problems, and concerns and to benefit from the latest findings of research and development. The full-time Inresidence Program affords opportunities for in-depth individualized study at the National Center ranging from 1 week to 1 year, and the Conference/Workshop Program, conducted at locations throughout the country, provides programs of professional development to thousands of educators and private sector trainers. In 1986, 78 programs were conducted throughout the United States, the District of Columbia, the Virgin Islands and Guam. Four thousand ninety-seven state and local leaders from 56 states and territories attended these activities. Topics included economic development, entrepreneurship, serving the handicapped, and basic skills enhancement through vocational and technical education.

Dissemination and Utilization is responsible for developing and coordinating a collaborative nationwide dissemination and utilization network to facilitate the use of vocational education research and development products and information in an effort to improve program quality and reduce duplication of effort. In order to accomplish the dissemination of information to a wider range of audiences, many collaborative arrangements are engaged with other research agencies, colleges and universities, and program improvement networks. Another method to enhance dissemination of model programs is to involve many local school districts and community colleges as demonstration sites. In 1986, the National Center responded to over 8,600 requests from various elements of vocational education and the private sector for information and technical assistance. These included personal, mail, and telephone interactions with a great deal of action transpiring via a national toll-free number. We distributed approximately 155,800 brochures; 269,900 print periodicals; and 34,100 products to teachers, administrators, and employers. Increasingly, other employment and training agencies, as well as professional associations such as the American Vocational Association, the American Association of School Administrators, the American Association of Community and Junior Colleges, the National Alliance of Business, the National Federation of Independent Businessmen, the National School Principals, are helping to disseminate the output of our research and development activities.

Information for National Planning and Policy Development is the function that has focused on what happens to students who take vocational education courses in high school or postsecondary institutions. This function has established that students who have taken a concentrated sequence of course in high school receive a substantial earnings increase of 8 to 10 percent when they obtain employment in fields related to their training. Vocational education programs continue to need improvement as they relate positively to placement rates for students who are entering the labor force directly. Of those students who choose to concentrate in vocational education, approximately 62 percent enroll in some form of postsecondary education after high school. Of those who enroll, approximately two-thirds are successful in these programs. This completion rate is very similar to that of students in the general curriculum and only slightly lower than that of students in the academic curriculum.

In the past year, we examined different types of secondary institutions—comprehensive high schools, shared-time area schools, and full-time vocational high schools—to determine if they have different outcomes. We found very few differences in the labor market experiences of graduates from these schools. Our data indicate that the characteristics of individuals and the intensity and duration of their participation in vocational courses are more important than the type of school in which the courses were taken.

The National Center Clearinghouse builds, maintains, and makes publicly accessible, online databases of information about vocational education program improvement projects and curriculum materials funded by the states that greatly reduces duplication of effort and enhances efficient planning and expenditures.
Among various other projects, this function links the vocational education community through ADVOCNET, an electronic communications network; develops information review papers; and provides user services and training. The National Center has developed a set of sixteen bibliographies dealing with the priorities of the Carl D. Perkins Vocational Education Act. Each bibliography lists National Center products that treat the Perkins Act issues and describes additional resources available through the ERIC system. The full set includes 247 National Center products and 107 other items.

Planning and Evaluation studies have examined programs and services for special populations at the high school level to identify key characteristics of effective programs. These characteristics include: (1) the involvement of stakeholders (parents, students, teachers, and administrators) in program planning, implementation, and evaluation; (2) the development of individual education plans; (3) modification of curriculum; and (4) provision of adequate support services. Another activity was to determine the quality indicators in high-technology programs in 2-year postsecondary institutions. Across 84 high-technology programs in 13 different technology areas, the following were judged as essential or very important elements:

- Technologically up-to-date faculty, equipment, and curriculum
- Program content and practices that are highly relevant to the business and industry work environment and organization demands
- Close attention to the needs of students including educational and financial support and responsive curriculum
- The theme of close cooperation and mutual support between an educational institution and the related business and industry community

This function also analyzed the effects of career guidance and counseling program. Data from 1980 sophomore and seniors included in the High School and Beyond database were used in this effort. The analyses revealed some interesting results. First, youth who attended schools that emphasize counseling (as indicated by student exposure reported by guidance personnel) tended to have higher career goals and attend college more than other youth. Second, youth who attended schools for which the counselor respondent expressed positive attitudes about the guidance program also tended to have higher career goals and college attendance. Youth who attended schools that emphasized occupational information had lower growth on test scores than other youth. Several interesting interactions were found, though none were large. A "strong" guidance program (as indicated by a summary index of many of the guidance program variables) increased the effect of base year occupational expectations on first follow-up educational expectations. The guidance index also decreased the influence of educational expectation on tests, tended to destabilize perceived college ability, and reduced the influence of test scores on perceived college ability.

Job Training Partnership Act Coordination - The National Center will shortly be presenting to Congress and the Secretaries of Education and Labor the first of the annual reports of joint planning and coordination of the Perkins Act and JTPA. This study found that many JTPA clients are receiving classroom occupational training in public vocational education facilities. The use of public vocational education, however, rarely comes about as a result of joint planning. Instead JTPA officials decide the kinds of training they want to offer and public vocational institutions are often selected on a competitive basis to provide the training. Most of the provisions in the Perkins Act and JTPA designed to encourage joint planning and coordination have been implemented and seem to have increased the awareness of the need to coordinate. Over 70 percent of state vocational education and JTPA administrators and council chairpersons feel coordination is better under JTPA than it was under the Comprehensive Employment and Training Act. Nevertheless, there is need for more joint planning of vocational education and JTPA programs.

Consistent with Title IV, National Programs, P.L. 98-524, we are requesting that the fiscal year 1988 appropriations levels for national programs cited therein be as follows:

o National Center for Research in Vocational Education with an annual grant of at least $6,000,000 to carry out the important tasks assigned by the congress. This funding level is the minimum annual funding level specified in the law. A comprehensive program improvement organization, such as the National Center, needs this level of forward-funding to plan its research and development programs and to be able to make tentative commitments with respect to data gathering, pilot sites, demonstration sites, and dissemination and training activities in its efforts to assure full implementation of the research and development outputs.

o National Occupational Information Coordinating Committee with an annual funding level of at least $3,500,000. This national program, and its affiliated State Occupational Information Coordinating Committee, assists students, educators, and occupational planners in determining future labor market conditions by improving and disseminating job information. This program has been jointly funded by the Departments of Education and Labor since 1978.

o Network of six regionally-based Curriculum Coordination Centers with an annual funding level of $1,000,000. These Curriculum Coordination Centers provide valuable technical assistance to state and local practitioners within their respective regions and dissemination of curriculum information and products. They definitely represent a cost effective means of providing curriculum development assistance to vocational education personnel at state and local levels.

The continued value and need for these national programs are clearly substantiated in the American Vocational Association's response to the Administration's FY 1988 Budget Request for Vocational Education (see attached). We request your serious consideration of continuation of funding for these national programs charged with essential vocational education program improvement functions assigned by the Congress.

RESPONSE TO THE
ADMINISTRATION'S FY88
BUDGET REQUEST FOR
VOCATIONAL EDUCATION

THE ADMINISTRATION'S REQUEST STATES:

"Funds for Research would be maintained in 1987 to support a final year of funding for the National Center for Research in Vocational Education. Funds for the Curriculum Coordination Centers and the ongoing National Assessment of Vocational Education, which have been appropriated under this authority in the past, were terminated by the Congress in 1987. Limited funding from other sources has been found to continue the National Assessment." (p. 53)

THE FACTS AND EVIDENCE STATE:

This position is counter to the statement on p. 1 of the request which indicates...a high priority for better resources and statistics. The House Committee on Education and Labor indicated that the National Center for Research in Vocational Education "...has provided a significant improvement to the vocational education field. This is documented by the recent endorsements of the National Center's performance and need for continuation by such groups as the National Council on Vocational Education, National Association of Large City Directors of Vocational Education, University Council for Vocational Education, National Association of State Directors of Vocational Education, the American Vocational Education Research Association, and the American Vocational Association. A recent resolution of the Secretary of Education's appointed National Center Advisory Committee also reaffirmed the current positive role and importance of the National Center.

In 1973 the U.S. Office of Education established a network of six regionally-based Curriculum Coordination Centers to share curriculum information and products, provide technical assistance to states, and build states' internal curriculum capacity. Annual impact reports and a third-part evaluation conducted in 1985 found the Centers to be a cost-effective method of providing curriculum leadership to the vocational community. During 1985, the Centers reported savings of 518,292. These savings represent a 12 to 1 return on the $785,351 federal investment in the Curriculum Coordination Centers. The Centers handled 7,566 requests for assistance, disseminating 76,614 curriculum items.

THE ADMINISTRATION'S REQUEST STATES:

"Funds for Data Systems would be maintained in 1987 for the final year of Department of Education support for the National Occupational Information Coordinating Council. The Council also receives Federal funding from the Department of Labor and Defense." (p. 53)

THE FACTS AND EVIDENCE STATE:

Adequate individual and program planning for vocational education requires the developing of labor market information. This is of paramount need when dealing with the poor, disadvantaged and handicapped. Without readily available labor market information, such as that provided by NOICC, these groups will conduct ineffective job searches, obtain inappropriate training, and experience continued discrimination.

Senator HARKIN. You have been funded at $16 million?

Dr. RYAN. Yes, sir; it is a 5-year funding, so it is a $30 million package, and we are up for recompetition this August.

Senator HARKIN. Anything else to add?

Mr. HANSON. I have no comments.

Senator HARKIN. Thank you for your testimony. We appreciate it.

STATEMENT OF DR. JAMES E. LYONS, PRESIDENT, BOWIE STATE COLLEGE, ON BEHALF OF AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

Senator HARKIN. I call next on Dr. James Lyons, president of Bowie State College representing the American Association of State Colleges and Universities.

Dr. LYONS. Good afternoon, Mr. Chairman. Mr. Chairman, I will make a couple of comments and then give you my recommendations.

One, the fact is that the shift from grants to loans is hurting college students throughout the country. In Maryland we have just conducted two studies that would suggest that, first of all, on retention, we conducted a study of Pell grant recipients and we discovered that if you control for academic performance that the poorest of Pell grant recipients, black Pell grant recipients, stays in college at about the same rate as the most affluent non-Pell grant white student. We can make that report available.

We have also in Maryland conducted another study recently that points out that the rate of black students going on to college is decreasing by about twice that of white students in Maryland, and we have looked at a number of factors that might be causing that. We have concluded that, again, it is very definitely related to financial aid, the shift from grants to loans.

Third, last week I was on a nationally televised talk show on student aid. I had done that same show 1 year ago, and as we screened calls during and after the program we noticed a tremendous increase in the number of students calling in or individuals calling and requesting financial aid information for graduate and professional schools, identifying themselves as persons who during their undergraduate years were saddled with so much debt, $10,000 to $15,000 to $20,000, and they were looking for financial information in order to go on to graduate and professional schools.

We do believe that there is a definite link there which speaks to the reason why so many minority students are not going on to graduate and professional schools in the same numbers.

We wish to make in this testimony the following recommendations:

One, that you reject the crippling $1.1 billion cutback in fiscal year 1988 for Pell grants proposed by the administration. This would have the effect of removing one out of three Pell grant recipients from the program's eligibility roles.

Two, appropriate sufficient funds in fiscal year 1988 to support Pell grants at the level described by the Higher Education Amendments of 1986, increasing the maximum grant from $2,100 to $2,500 and implementing reforms in the system of assessing actual college costs and determining students' needs.

Three, enact supplemental funding legislation to prevent $287 million in impending grant cutbacks which would affect 1 million eligible Pell grant recipients next fall, including total elimination of support to 200,000 students.

PREPARED STATEMENT

I want to commend this subcommittee for recommending the supplemental appropriation. When the legislative process is completed, I hope Congress and the President will ultimately accept the committee's full recommendations.

Thank you.

[The statement follows:]

STATEMENT OF DR. JAMES E. LYONS

I APPRECIATE THIS OPPORTUNITY TO TESTIFY ON BEHALF OF THE AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES AND THE NATIONAL PELL GRANT COALITION, A GROUP OF 33 EDUCATION, LABOR AND CIVIC ORGANIZATIONS PROMOTING A STRONGER AND BETTER FUNDED PELL GRANT PROGRAM.

MR. CHAIRMAN, MEMBERS OF THIS BODY ARE ALREADY FAMILIAR WITH THE EXTENT TO WHICH PELL GRANTS ARE ACHIEVING THEIR HISTORIC PURPOSE. NEARLY THREE MILLION AMERICAN STUDENTS ARE RECEIVING GRANTS THIS YEAR. THREE OUT OF FOUR OF THESE PEOPLE HAVE FAMILY INCOMES UNDER $15,000 A YEAR AND HALF HAVE FAMILY INCOMES BELOW $6,000 A YEAR. ONE THIRD OF ALL PELL GRANT RECIPIENTS ARE NON-WHITE. ABSENT A PELL GRANT PROGRAM, ALMOST NONE OF THESE MEN AND WOMEN WOULD FIND IT POSSIBLE TO ATTEND A COLLEGE OR UNIVERSITY. ALL OF THEM HAVE REASON TO BE GRATEFUL-- AS WE IN THE PELL GRANT COALITION ARE-- THAT THE CONGRESS AS A WHOLE AND THIS BODY IN PARTICULAR HAVE KEPT THIS VITAL PROGRAM ALIVE.

YET THE FACT CONFRONTING US ALL IS THAT THE PELL GRANT PROGRAM HAS GROWN WEAKER AS A TOOL TO REMEDY THE EFFECTS OF INEQUITY AND DISADVANTAGE. THE COMBINED EFFECTS OF RISING COLLEGE COSTS AND LIMITED APPROPRIATIONS HAVE LED TO A DECREASE IN THE EFFECTIVENESS OF PELL GRANT SUPPORT. WHILE IN 1979 THE MAXIMUM PELL GRANT COVERED ALMOST HALF OF COLLEGE COSTS ON AVERAGE, THE MAXIMUM PELL GRANT COVERS ONLY ABOUT ONE-THIRD OF SUCH COSTS TODAY. AND WHILE GRANTS REPRESENTED ABOUT 80% OF THE FEDERAL GOVERNMENT'S STUDENT AID CONTRIBUTION IN 1976, GRANTS NOW ACCOUNT FOR LESS THAN ONE-THIRD OF FEDERAL AID WHILE LOANS HAVE SKYROCKETED TO TWO-THIRDS. WE ARE TO A RAPIDLY INCREASING EXTENT FORCING EVEN THE BRIGHTEST AND MOST AMBITIOUS OF OUR LOW-INCOME STUDENTS TO CHOOSE BETWEEN A FUTURE WITHOUT A COLLEGE DEGREE OR A FUTURE HEAVILY BURDENED WITH DEBT.

FOR THESE AND OTHER REASONS WE ARE WITNESSING A REVERSAL OF THE TREND TOWARD GREATER MINORITY PARTICIPATION IN HIGHER EDUCATION

AS A NUMBER OF STUDIES DOCUMENT. THIS IS A PHENOMENON ALL OF US CONCERNED WITH THE EXPANSION OF EQUAL OPPORTUNITY SHOULD DEPLORE.

MR. CHAIRMAN, THE TREND TOWARD DIMINISHED PURCHASING POWER OF GRANTS TO THE NEEDIEST STUDENTS MUST BE REVERSED. TO THAT END AASCU AND THE NATIONAL PELL GRANT COALITION CALL UPON CONGRESS TO TAKE THREE MAJOR STEPS THIS YEAR:

1. REJECT THE CRIPPLING $1.1 BILLION CUTBACKS IN FISCAL 1988 PELL GRANT APPROPRIATIONS PROPOSED BY THE ADMINISTRATION-- WHICH WOULD HAVE THE EFFECT OF REMOVING ONE OUT OF THREE PELL GRANT RECIPIENTS FROM THE PROGRAM'S ELIGIBILITY ROLLS.

2. APPROPRIATE SUFFICIENT FUNDS IN FISCAL 1988 TO SUPPORT PELL GRANTS AT THE LEVEL PRESCRIBED BY THE HIGHER EDUCATION AMENDMENTS OF 1986-- INCREASING THE MAXIMUM GRANT FROM $2,100 TO $2,500 AND IMPLEMENTING REFORMS IN THE SYSTEM OF ASSESSING ACTUAL COLLEGE COSTS AND DETERMINING STUDENTS' NEEDS.

   AN APPROPRIATION OF AT LEAST $4.9 BILLION IS REQUIRED TO ACCOMPLISH THIS GOAL, $1.1 BILLION OVER THE CURRENT SUPPORT LEVEL.

3. ENACT SUPPLEMENTAL FUNDING LEGISLATION TO PREVENT $287 MILLION IN IMPENDING GRANT CUTBACKS WHICH WOULD AFFECT A MILLION ELIGIBLE PELL GRANT RECIPIENTS NEXT FALL-- INCLUDING TOTAL ELIMINATION OF SUPPORT TO 200,000 STUDENTS.

   I WANT TO COMMEND THIS SUBCOMMITTEE FOR RECOMMENDING THIS SUPPLEMENTAL APPROPRIATION. WHEN THE LEGISLATIVE PROCESS IS COMPLETED, I HOPE CONGRESS AND THE PRESIDENT WILL ULTIMATELY ACCEPT THE COMMITTEE'S FULL RECOMMENDATION.

MR. CHAIRMAN, THESE RECOMMENDATIONS ARE NOT COMPLEX, NOR ARE THEY OVERLY COSTLY WHEN ANALYZED AGAINST THE BACKDROP OF RISING COLLEGE COSTS.

THEY ARE, HOWEVER, URGENTLY NEEDED-- NOT JUST BY THE NEARLY THREE MILLION PELL GRANT RECIPIENTS AND BY THE HUNDREDS OF THOUSANDS OF OTHER LOW-INCOME STUDENTS WHO HOPE TO ATTEND COLLEGE NEXT YEAR, BUT BY THE NATION AS A WHOLE. THE SIMPLE FACT IS THAT CURTAILING EDUCATIONAL BENEFITS FOR THE POOR WILL INEVITABLY RESULT IN A REDUCTION OF THE CAPACITY OF THE NEXT GENERATION OF AMERICANS TO MEET THE NEEDS OF A HIGHLY COMPETITIVE WORLD. RESTORATION OF PROPOSED PELL GRANT CUTBACKS, AND A FURTHER STRENGTHENING OF STUDENT SUPPORT PROGRAMS, WILL ENHANCE BOTH THE WELFARE OF THE INDIVIDUALS WHO DERIVE IMMEDIATE BENEFIT FROM THESE EFFORTS, AND SOCIETY AS A WHOLE WHICH MUST ULTIMATELY RELY ON ALL ThE MEMBERS OF THE NEXT GENERATION TO KEEP OUR ECONOMY STRONG AND OUR POLITICAL SYSTEM HEALTHY.

Senator HARKIN. Thank you very much. We appreciate your testimony, Dr. Lyons.

I have to apologize to the rest who are here. The subcommittee will stand in recess until the Chair returns.

[A brief recess was taken.]

STATEMENT OF MARY J. PRESTON, LEGISLATIVE DIRECTOR, UNITED STATES STUDENT ASSOCIATION

Senator CHILES [presiding]. We are going to start now with Mary Preston, legislative director of the United States Student Association.

I just want to sort of explain to everybody that we are under some time constraints this afternoon. We put the new budget modifications out on the floor and I am going to have to go back to the floor in a little while.

I would like to accommodate as many people as we can. I know some of you are here from out of town. I will ask you to be very, very brief, and we will take your statements, and we will certainly study those, but we do want to try to accommodate everybody we possibly can; yet, I have to move this thing along. I am going to have to go back to the floor, and I do not want people sitting here having to come back another day.

Ms. PRESTON. Thank you, Mr. Chairman. I am delighted to be here today, and I will try to keep my oral remarks as brief as possible.

Senator CHILES. We will put your statement in full in the record.

Ms. PRESTON. Thank you. I am happy to appear here representing the over 3 million students attending USSA member campuses from around the country.

I am the legislative director of the United States Student Association. As you know, we reject the President's budget proposals. We know that you do, and so I will not harp on those anymore.

There was some discussion earlier when Senator Harkin was in the Chair, and it was about the availability of grants versus loans. I just will note that 34.5 percent of all financially dependent guaranteed student loan borrowers have a family income of less than $15,000 a year, so that loans are a very important supplement, and we think perhaps too important of a supplement to the Federal grant and work programs.

We feel that the various financial aid programs work together to meet the needs of individuals, and they must be preserved and expanded to meet today's new challenges. We have already heard from a member of the National Pell Grant Coalition, and I will not repeat what he has said, but we will join him in requesting that the $2,500 maximum grant be funded to fully fund the Pell Grant Program.

Also, later on today you will hear from the TRIO Program administrators, and I will not duplicate their work but join them in supporting full funding of the TRIO programs and restoration of the loss that they have undergone in the past several years.

I would like to talk briefly about some of the campus-based programs, supplemental educational opportunity grants, State student incentive grants, and college work-study. These are relatively smaller programs but they are important in providing small amounts of critically needed aid to students on campus.

They allow the financial aid administrator to assess an individual's need and to provide the student that critically needed extra several hundred dollars that may tip the balance in favor of their retention as a full-time student or their retention at all.

Over 50 percent of the State student incentive grant funds go to students with incomes of less than $10,000 a year, and I think it is clear that these programs work in conjunction with the larger programs to facilitate the flexibility needed to assess individual needs.

We are very strongly opposed to the drastic expansion of the untried Income Contingent Loan Program. It is much too early to assess this program's viability. We are very concerned with student debt, and we feel that it should remain a pilot program.

I would like to just talk very quickly about three new programs that are small items that we think greatly expand information in educational opportunity. The toll free hotline is the lone survivor of the information center for postsecondary education which we and others lobbied for during the reauthorization.

This hotline could provide financial aid administrators and students with the ability to call up toll free and get information on campus that they are often lacking, like regulations, rules, and needs assessment, and regulations, things like that.

We also are very strongly in support of special child care services for disadvantaged college students. As long as low-income parents are able to attend school, they will be more likely to continue cycles of poverty and welfare dependence. In this small program, an authorization of $10 million would help institutions to provide child care for the students who are unable to provide it on their own.

PREPARED STATEMENT

I would also like to rise in support of $10 million to the title I programs. As you know, with the changes that we are experiencing in our economy, there is a great deal of need for adult students, enrolled students, to get these services.

[The statement follows:]

STATEMENT OF MARY J. PRESTON

Mr. Chairman and members of the Subcommittee, my name is Mary Preston and I am the Legislative Director of the United States Student Association. USSA is the nation's oldest and largest student membership organization and represents over three million students attending diverse postsecondary education institutions. I appreciate the forum which you have provided for me to voice the concerns and recommendations of our membership regarding student aid appropriations for fiscal year 1988.

May I first say that USSA rejects entirely the Administration's proposals for education funding in fiscal year 1988. At a time when our nation's greatest challenges include a large trade deficit, a massive national debt, high unemployment rates and a drastic need for expanded educational opportunity for youth and adults, the Executive Branch is attempting to dismantle many of the student aid programs and to limit, not expand, access and opportunity for low income individuals.

Loans, particularly with unfixed interest rates and no in-school interest subsidy, do not reach those that most need access to educational opportunity. Loans are currently an important- perhaps too important- student aid supplement for low income students (for example, 34.5% of all financially dependent Guaranteed Student Loan borrowers have a family income of less than $15,000/year), but they cannot replace the federal grant programs which give low income individuals the ability to begin a college education.

The most innovative loan program, be it income-contingent or fixed payment schedule, does not take the place of a Basic Educational Opportunity Grant, a college work study job, or participation in a TRIO program. The Department of Education's assertion that "if the student needs aid, the aid will be available," fails to reflect the important role grant programs play in improving access for low income individuals and their families. The various financial aid programs work together to meet the needs of individuals. They must be preserved and expanded to meet today's new challenges. I have included at the back of this testimony an article entitled "The Student Response to the President's Fiscal Year 1988 Budget Proposals" which I wrote earlier this year, and ask that it be included in the record.

Congress, unlike the Executive Branch, seems to better understand the link between broad access to a postsecondary education and our nation's economy and productivity. USSA remains commmitted to the ideal that an educated citizenry is a critical component of a healthy and secure, and democratic nation. Our recommendations today are made with this ideal in mind.

PELL GRANTS

Pell Grants are the basic opportunity grants which enable over three million individuals to begin to pursue their educational goals. As you know, more than 75% of Pell Grant funds go to students with annual adjusted family incomes of $15,000 or less. USSA urges the Appropriations Committee to fully fund the program and to meet the $2,500 maximum grant authorized for fiscal year 1988. Full funding of this program is badly needed to restore Pell Grants' purchasing power on campus, which has been eroded by inflation, and to allow families with incomes of over $20,000, and several people in college, to be eligible for the program.

TRIO PROGRAMS- STUDENT SUPPORT SERVICES

The six programs under this heading are specially designed to identify and assist low income, first generation, and physically handicapped individuals, and to give them the skills, training, and counseling necessary to apply, enroll, and remain enrolled in college. In fiscal year 1986, 425,000 students were served by five TRIO programs. Of these, two thirds were from families whose total taxable income was less than 150% of the poverty level, and where neither parent had graduated from college.

Because racial minorities are over-represented in low income groups in our country, TRIO programs have an important role in expanding opportunity to Americans of Color. Two of the programs, Talent Search and Educational Opportunity Centers, were found to have placed an estimated 20% of ALL minority freshmen who entered college in 1982. During that time, the programs only reached 5% of the eligible population.

Hortense Alexander, the TRIO Desk Director for USSA this semester, will be submitting testimony on the specific TRIO programs, and I will not duplicate her work. I will stand with her, the National Council of Educational Opportunity Associations, and TRIO supporters from around the country in rejecting cuts to the TRIO programs. USSA recommends an appropriation of $215 million for TRIO in fiscal year 1988.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG)

Supplemental Educational Opportunity Grants is a campus-based program which gives financial aid administrators the flexibility to assess individual need and to provide supplemental aid to students with exceptional need. In fiscal year 1987, 720,000 students will participate in the program. The average student award is $550, and 65% of SEOG funds go to students with family incomes below $18,000/year.

This program is so important because if often tips the balance in favor of a student's retention in school, or their maintenance of a full- instead of a part-time course load. Priority is given to those students already receiving Pell, and the grant is used to provide small amounts of critically needed aid. Without this program financial aid administrators would have a drastically reduced ability to package an individual's student aid to reflect their particular needs. USSA recommends an appropriation of not less than $425,000 for fiscal year 1988 to ensure that the program is continued at least at current service levels.

COLLEGE WORK STUDY

College Work Study, like SEOG, is critical in providing flexibility to work out individual students' needs. Although many work-study jobs are very low paid, reflecting the current inadequate minimum wage, the program provides jobs to more than 787,000 students, whose financial aid packages would have been insufficient to cover their costs without one. Attempts are made to provide students employment in their field of study, so College Work study often increases a financially needy student's on-the-job training and experience.

Other important uses of College Work Study funds are the establishment or expansion of Job Location and Development Programs, work programs in conjunction with the private sector, and the Community Service Learning Program. The College Work Study program is viable and contributes greatly to available student aid on campus. USSA recommends an appropriation of $600 million for fiscal year 1988.

STATE STUDENT INCENTIVE GRANTS (SSIG)

State Student Incentive Grants are a federal program designed to assist states in providing need-based grants to students. Approximately 276,000 students each year benefit from this federal-state partnership. SSIG funding should be maintained because of the incentive it provides to states to provide grants: in about one-half of the states, SSIG (with State matching funds) accounts for a major portion of all State grants. SSIG, like SEOG, allows for flexibility within the financial aid process to target small but critical amounts of money to needy students. The average award is near $500, and over half of SSIG recipients are from families with incomes of less than $10,000/year. USSA recommends an appropriation of $80 million to continue the program.

FEDERAL LOAN PROGRAMS

USSA continues to support federal loan programs as important supplements to need based grants and work-study. We support the continuation of the Guaranteed Student Loan Program (GSL) and the National Direct Student Loan Program (NDSL) in the manner that Congress has just authorized under the Higher Education Act amendments of last year. We urge you to reject the cutbacks and changes proposed by the Department of Education, which would cause greater debt burdens among students.

We are particularly opposed to the drastic expansion of the untested Income Contingent Loan Program which the Department proposed. USSA is concerned about long-term indebtedness, its effect on choice of major and career, and student's ability to work in traditionally lower-paying but extremely important fields such as teaching and social work. Under the Income Contingent Loan Program, students could become like third world nations:

unable to pay off the interest, much less the prinipal, of their loans.

It is irresponsible to lift loan limits on this program, as the Department of Education has requested. It is also much too early to assess this program's viability, and it should remain a pilot program, funded at $5 million, in fiscal year 1988.

NEW PROGRAMS

There are several new programs which, because of their importance in providing information and educational opportunity, are targetted for funding in fiscal year 1988 by USSA. One of them, the Toll Free Hotline authorized under Title IV assistance, is the lone survivor of the Information Center for Postsecondary Education which USSA, the National Association of College Admissions Counselors, and others lobbied for during the reauthorization.

I have inquired with one of the companies which the Department of Education contracts out with as to an estimate of the cost of the Toll Free line. The answer I received was that the cost would be $2-5 million above what is now spent on existing information lines at the Department. This Hotline could provide students and their financial aid administrators a readily-available line on information regarding rules and regulations, need assessment, and delivery of student aid. As you know, students and administrators are often unapprised of changes in the student aid process, and the financial aid office is usually complete chaos as students and administrators are pitted against one another because of ignorance and aggravation. Our office gets calls constantly from students and administrators who are frustrated with the financial aid process. The Hotline could clear up a lot of this confusion at a mimimal cost, and it should be instituted at the earliest possible date. USSA recommends that $5 million is appropriated to the development of the Hotline in fiscal year 1988.

Another new program under Title IV should be instituted immediately because of its importance in improving educational opportunity to individuals who have traditionally been unable to enter or continue school. Special Child Care Services for Disadvantaged College Students use the same qualifications as TRIO programs and are designed to assist institutions in providing care for the children of low income parent-students. Several Statewide Student Associations, including New York, Oregon, Wisconsin, and California, are pressing for the expansion of child care services on campus. Congress identified child care as a major concern of students nationwide, and should make its new policy into reality. These individuals need federal assistance to complete their educational program and improve their earning opportunities. There are many ways in which small federal grants could work in conjunction with campus-based child care services to extend service to low income students. As long as low income parents are unable to attend school, they will be more likely to continue cycles of poverty and welfare dependence. What the child care service program will do is assist those who are most trying to help themselves by investing in their future. USSA strongly urges the appropriation of $10 million to begin this important new program.

Finally, I would like to recommend funding for the new Title I program which will provide much needed services to adult and rural students and potential students. With the shifts in our economy, the loss of hundreds of thousands of manufacturing jobs, and the current crisis in the small farm industry, it is more crucial than ever to provide information, counselling, and flexible hours and locations for college courses. Title I funding would help to meet the needs of the ever-growing adult and non-traditional student population by providing grants to institutions for the development and expansion of night classes, alternative class locations, curricula, including adult literacy efforts, and cooperative educational ventures with community-based organizations. There is also the possibility that these funds could be used in conjunction with the yet-to-be-passed Worker Dislocation Act. Congress should not wait any longer to help institutions meet the needs of the fastest growing student population, and should make an appropriation of $10 million to Title I.

On behalf of our membership, I thank you for this opportunity to contribute to the appropriations process. We hope that our recommendations have been of help to you. We urge you to appropriate sufficient funds to the student aid programs in fiscal year 1988, and remind you that each dollar invested in education is a continuing investment in our nation's future and productivity. Thank you.

STATEMENT OF JOHN D. SKARE, EXECUTIVE DIRECTOR, NATIONAL STUDENT ROUNDTABLE

Senator CHILES. Now we will hear from John D. Skare, executive director, National Student Roundtable.

Mr. SKARE. I am John Skare, executive director of National Student Roundtable. It is an honor to be here this afternoon to speak to you on behalf of the students of all this Nation's institutions of higher education.

We number some 12 million citizens on a variety of public, private, and proprietary campuses. We are a diverse group, with seemingly few things in common save one, and that is, financing a college education.

This is reflected in the National Student Roundtable's mission to advocate for students in higher education to speak up for their ideals and concerns of a new generation of American students.

Many of these issues are presented to you by the Higher Education Act, as amended, and signed into law last fall. The time has come for us, Mr. Chairman, to work together to retool American higher education.

Students today have inherited a system that has been the object of neglect by the President, the Department of Education, and by some administrators around the country who have allowed fiscal policy to negatively impact the direction of academic excellence in America.

For over 200 years, America has committed its resources to education and the advancement of its citizens through higher learning. It is a long recognized equation between education and quality of life, and trade and our economic position in the world.

I respectfully think that the trade and national deficits that have mushroomed in the 1980's are, in part, the result of the diminished commitment to education.

Senator CHILES. I could not agree with you more. But I know you have got something more to tell me, and I need to get you to tell me that.

Mr. SKARE. It is coming right away. What is to be done? The question of the students back on campus, as they stand in lines to fill out more forms and pay ever increasing fees is their special concern about the need for renewed commitment and leadership on the part of the Congress to funding higher education.

And as a representative here on Capitol Hill, I bring to you one overriding objective, and that is, preserve the student aid programs in the Higher Education Act, fully funding the recommendations of the authorizing committees.

We also come to you today to talk to you about something other than cash, and that is, that you need to help with another aspect of the act, and that is, several provisions relating to students applying for and receiving Federal financial aid.

The provisions are, a toll free number, summary reports of obligations, and a pre-form for applications for all Federal student aid programs.

These programs need to be implemented and need your attention at this time.

PREPARED STATEMENT

Thank you for your time and consideration of these matters, and I appreciate the opportunity to appear here and work with you.

[The statement follows:]

STATEMENT OF JOHN D. SKARE

The National Student Roundtable began its work in May of 1985, during the reauthorization process of the Higher Education Act of 1965. Organized by student leaders as a professional advocacy organization for students enrolled in postsecondary institutions the Roundtable has focused these last two years on higher education issues and the impact on students of federal policy decisions. As a national membership organization we represent the interests of all sectors of higher education: two- and four-year public, private, and proprietary students. It is on behalf of the 12 million students enrolled in these various institutions that I come before you today to speak about goals, priorities, and concerns of education's consumers. With Reauthorization completed and signed into law our attention now turns to the implementation of program initiatives mandated by the new Act.

Mr. Chairman, I feel compelled to inform you of the weakened state of our postsecondary system. Students have been shut out of higher education as a result of tightened restrictions, diminishing financial support, and a rhetorical shoving match about who benefits and who should pay. As we wrestle with questions of deficits and national directions we must not forsake the longstanding commitment to higher education for American citizens and we must bear in mind that as individuals benefit, so does the nation's economy and standard of living. It is inherent upon all of us to work together in the process of re-thinking priorities and re-aligning national resources.

As a component piece of the "Great Society" programs of President Johnson the Higher Education Act of 1965 framed the American approach to postsecondary education. For many years the American economy and our commitment to education expanded, allowing a greater number of American citizens to obtain advanced coursework. It was a time of growth for the country and its citizens and an embodiment of the "American Dream."

But times have changed. Since 1980 American college students have lost purchasing power, faced greater financial burden, and unfortunately become hardened to the fact that education must be a tool of career advancement. While students appreciate the fact that

Congress has said "NO" to the most severe cuts in student aid proposed by the Administration we come before you today to express our continuing concern over the direction and future of higher education. Many groups, ours among them, have been to examine the qualitative issues on our campuses and are developing proposals to fine tune our nation's intellectual engine. But, gentlemen, a more pressing situation faces us all today--- adequate funding for higher education.

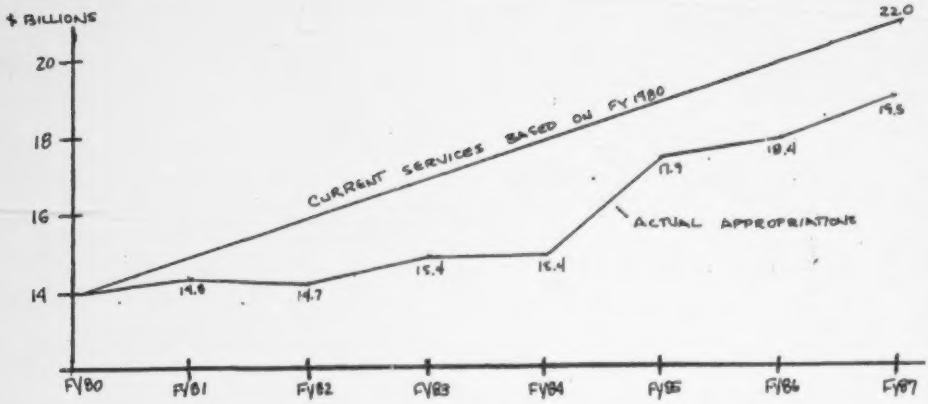
While evaluations must be made and plans for the future drawn up, the reauthorized Higher Education Act provides the conceptual framework for decisions that you must make in the 100th Congress. The members of Congress who spent many months working in conference to update the Higher Education Act to the needs and limitations of America in the 1980's realized the sensitive balance of fiscal and social policy. They came to understand that it's a bottom-line question: will we put dollars to work and begin to re-tool America's system of higher education? Their answer was yes.

Program Funding Levels under PL 99-498

Pell Grants:	Fully funded $2,300 maximum award in 1987
State Educational Opportunity Grants:	$490 Million
TRIO Programs:	$205 Million
State Student Incentive Grants:	$85 Million
College Work Study:	$656 Million
National Direct Student Loan:	$268 Million

For America and its college students to meet their full potential it is essential that the funds be made available by Congress to fulfill the extent of the law as authorized under the new Higher Education Act. This commitment is necessary in order to offset some disturbing trends in the economics of student aid. There are three that are especially critical to students.

First, the loss of student purchasing power. As in the larger economy, students have gotten caught in the economic squeeze of expenses and revenues. College costs have risen at twice the rate of inflation since 1980 while federal student aid dollars have dwindled. Consider the following graphic: aid has not kept up with student need, as expressed in 1980 service levels.



Second, the growing problem of unmet student need. The equation is simple: with costs going up and financial aid less available a student carries a greater need for assistance. Restrictions and tightened needs analysis have kept the number of students receiving financial aid artificially down, in comparison to cumulative need. While we can only guess at the extent of the problem nationally, the State of Florida recently estimated the unmet need of students enrolled in its State University System at some $40 million for one academic year.

Third, a fair financial aid mix. Over the last several years there has been a noticeable shift in the composition of financial aid packages. Once grants were a majority, now loans constitute the bulk of student dollars. Government resources have indeed become strained over the last decade and loans are an understandable alternative form of aid. However, students are becoming overwhelmed by the loans that are necessary to afford an education. It should concern us all that students are being forced to commit ever greater amounts of future income to obtain an education, income that could be better spent on durable goods and services. Grants must again be looked to as a primary vehicle of student aid if we do not want college education to become be something for only the rich to enjoy.

American college students need your help to meet the many academic, financial and career-related challenges that face them. We have learned the hard way that we live in a competitive world, one that will reward those who can lead the global community. If there is one thing you can do now to help America it would be to fully fund higher education assistance programs. The return on the investment is good for all of us...

- Graduates earn more than other segments of the population.
- The Treasury collects more tax dollars from graduates.
- Graduates enjoy better standards of living.
- Graduates are better informed and more active participants in the American democracy.

The National Student Roundtable strongly urges you to fully fund the Pell Grant Program this year. It is the most important financial and moral support you can give to American college students. We are in desperate need of more grant funds. As the members who heard testimony in the Education Committees well know, the need for increased aid to higher education is paramount. And the time for action is now.

In closing, Mr. Chairman, I would like to thank for the opportunity to speak to the committee today on behalf of college students around the country. Students are willing and able partners in the work that must be done to prepare America for continued prosperity and world leadership. We look to the future with confidence in you and your leadership and with hope that your colleagues and America will follow. Thank you.

Senator CHILES. Thank you. We are certainly going to work with you. Now we will hear from Mr. William E. McHenry.

STATEMENT OF WILLIAM E. McHENRY, PH.D., THE NATIONAL ALLIANCE FOR MINORITY GRADUATE AND PROFESSIONAL EDUCATION

Mr. McHENRY. Mr. Chairman, my name is William E. McHenry. I'm an associate professor of chemistry, and I direct the Graduate School Minority Fellowship Program on my campus.

I am appearing today on behalf of Mississippi State University and the other 155 institutions that have Patricia Roberts Harris fellowship programs.

Since my testimony will be included in its entirety in the record, I will go to some of the points.

The Harris scholarship program is the only Federal grant program administered by the Department of Education that addresses the problem of underrepresentation of minority individuals and women in our graduate professional programs. Over 60 percent of our Nation's brain power belongs to minority individuals and women.

By the year 1992, it is predicted that three workers will be needed to provide funds for each retiree, and one of these will be a minority. And to improve our Nation's business competitiveness and military preparedness, plus our scientific and technological status in a rapidly developing world, these traditionally locked out groups must be encouraged to participate fully in our educational system.

In 1985, 31,201 doctorate degrees were awarded by the U.S. institutions. Only 6.9 percent of these degrees were awarded to minorities who are black, Hispanic, or American Indians. Over 20 percent were awarded to non-U.S. citizens.

The erosion of black and other minority participation in graduate schools would have been much worse had it not been for the Harris fellowship program.

I have included in the record a list of over 500 students that have completed their graduate degrees with the help of this program. And I will talk with you for a few minutes about one that is more typical than atypical, and his name is Mr. James Smith.

The November 6, 1985, issue of the Chronicle for Higher Education featured Mr. Smith. Mr. Smith completed a doctorate degree in analytical chemistry at my university in 3 years. Mr. Smith, who is black, was the first of seven children of his family to complete a college degree. In 1983, he was voted the outstanding graduate student in our Chemical Sciences Program, and he also won a national award for research of molecular spectroscopy.

He would not have been able to attend or complete his degree, had it not been for the work of your committee and your colleagues in funding this very vital and important program.

Mr. Chairman, the Higher Education Act reauthorization of 1986 modified this program. It improved it, and it put it on a level with other national fellowship programs. The stipend level was increased from $8,400 to $16,000, which was a much needed improvement.

But the amount appropriated did not increase. For fiscal year 1986, we were able to support 1,426 fellows; with the newer rate and without having an increase in the budget, we are not able to support the 856 continuing fellows at the new rate.

I am here requesting appropriation in fiscal year 1988 of $22,500,000 to bring back the number of fellowships that we were awarded before the new Higher Education Act was enacted.

PREPARED STATEMENT

I thank you for allowing me to present this testimony. And I would be happy and pleased to answer any questions.

Senator Chiles. Thank you. We will certainly look at your request.

[The statement follows:]

STATEMENT OF WILLIAM E. McHENRY

Mr. Chairman, and Members of the Subcommittee, I am pleased to present testimony to you today in support of adequate funding for the Patricia Roberts Harris Graduate Fellowship Program.

The Patricia Roberts Harris Graduate Fellowship program (formerly known as the Graduate and Professional Opportunity Fellowship program) authorizes the Secretary of Education to award discretionary grants to institutions of higher education to assist minorities and women to undertake graduate and professional study in fields in which they have been traditionally under-represented. The Department allocates fellowships on a competitive basis to institutions with doctoral and professional degree programs in which there is a national need for highly trained individuals. The institutions, in turn, recruit individuals from under-represented groups and award fellowships to students who demonstrate financial need and who plan to pursue advanced degrees in approved academic areas.

In 1985-86, minority group representation in the program included: Blacks (41%), Hispanics (21%), Asian-Americans (11%), Native Americans (6%), and white females (21%). Women, overall, comprised more than 50 percent of the 1417 fellows supported during academic year 1985-86. It is very questionable whether these individuals would have pursued graduate study in the absence of this program. Students studying in the fields of engineering and the physical and life sciences received over 50 percent of the fellowships awarded in 1985. As you can see, Mr. Chairman, this program, while modest in the scope of the entire education budget, represents a very significant contribution in terms of resources to continue opportunities for minority students, and the institutions that train these students.

The Higher Education Act Reauthorization of 1986 modified the Graduate Professional Opportunity Program by redesignating it as the Patricia Roberts Harris Fellowship Program. The Program was significantly improved by increasing the level of each fellowship to $16,000 per year from the level of $8,400 per year. This program improvement, however, created a significant gap in the Education Department's ability to continue to fund the same amount of fellowships at the increased rate. A supplemental appropriation is necessary for FY'87 to address the funding shortfall, and to continue funding a level of fellowships comparable to recent years. An increased appropriation is necessary for FY'88 to restore the level of funding, and the number of fellowships to the pre-1987 level.

A Supplemental Appropriation of $6,000,000 to fund the program at $17,750,000 in FY'87 would allow current fellowships to be continued at the increased rate, and allow 250 new fellowships to be granted. A supplemental appropriation of $2,000,000 to fund the program at $13,750,000 in FY'87 would make a significant difference, but still allow only continuation of current 856 fellowships with no new fellowships awarded.

An FY'88 appropriation of $22,500,000 would allow restoration of fellowships to the FY'86 level of 1400, and provide the additional funding for each fellowship authorized by the Higher Education Act Amendments of 1986. This is the level of funding we seek to witness the continued progress for minorities who seek graduate education. It is likely, if funding for this program is not increased significantly that no new fellowships could be granted for several years, thus, severely underminding the intent of the program, and worse eliminating a great number of opportunities for black and other minorities who wish to seek graduate professional education.

Mr. Chairman, we have listed below in chart form the current status of the program, and our recommendations. Currently in FY'87, there is a significant decrease in the number of fellowships being funded. The recommendations that our organization makes that will restore the number of fellowships to 1400, the same number of fellowships that were funded in fiscal year 1986, before the Higher Education Act Amendments.

Thank you for the opportunity to present our views. We certainly look forward to working with your subcommittee to provide adequate resources for the Patricia Roberts Harris Fellowship Program.

I am pleased to respond to any questions you have.

	FY'86	FY'87 current	NAMGPE FY'87 proposed	NAMGPE FY'88 proposed
Funding	$11,250,000	$11,750,000	$17,750,000	$22,500,000
# of Fellowships	1428	856	1106	1400
$ Amount of Fellowship	$8,400	$16,000	$16,000	$16,000
o Student	$4,500	$10,000	$10,000	$10,000
o Institution	$3,900	$6,000	$6,000	$6,000

STATEMENT OF CHARLES A. WALKER, PH.D., CHANCELLOR, THE UNIVERSITY OF ARKANSAS AT PINE BLUFF

Senator CHILES. Now we will hear from Mr. Charles Walker, who is chancellor at the University of Arkansas at Pine Bluff, in Pine Bluff, AR.

Dr. WALKER. Thank you, Mr. Chairman.

I would like to say at the outset that I appreciate this opportunity. And I've spent 12 years as dean of the College of Pharmacy at Florida A&M, so we have had pleasant experiences in discussion——

Senator CHILES. What did you do wrong that you had to leave there? [Laughter.]

Dr. WALKER. Senator Bumpers made a better offer. [Laughter.]

Senator CHILES. Well, I hope you can do something for that State out there; they need it. [Laughter.]

Dr. WALKER. We are trying, with your help.

I will just be very brief, and summarize three points that I would like to speak to.

The first two deals with title III, title III, part B, of the Higher Education Act, which focuses on strengthening historically black colleges and universities.

These funds are very useful for redevelopment and modernizing facilities, training, research, and laboratory equipment, and faculty development. And these resources have proven critical to these institutions receiving these grants.

And consequently, we urge your subcommittee to provide an adequate level of funding at $60 million at the very least for part B of title III.

Part C of title III is equally important to institutions like the University of Arkansas at Pine Bluff, and the other 114 historically black colleges and universities, because part C of title III, as you know, serves to increase the endowment of these institutions. It helps to make them financially independent, and this is extremely important, that we try to develop financial independence for our historical black colleges.

The third concern that I have is dealing with the financial aid for students. We are very concerned that Pell grants, guaranteed student loans, college work-study, and supplemental educational opportunity grants, be restored to their realistic and maximum funding levels for students.

Student aid resources provided by your subcommittee are the genuine basic support that allow disadvantaged students to attend our schools.

And finally, Mr. Chairman, the University of Arkansas at Pine Bluff, and the other historically black colleges, recommend the creation of initiatives aimed at strengthening the research infrastructures of educational institutions that offer degrees in health and technological sciences.

Such initiatives are particularly valuable and important in attempts to investigate diseases, illnesses, and other technological challenges, and for the training of young clinicians, scientists, and scholars.

PREPARED STATEMENT

Mr. Chairman and members of the committee, I appreciate your listening to these views.

Senator CHILES. We appreciate your testimony. Thank you.

[The statement follows:]

STATEMENT OF CHARLES A. WALKER

Good afternoon, Mr. Chairman and members of the subcommittee. It is a pleasure to have this opportunity today to speak to you regarding Federal student and institutional aid programs vital to the survival of our Nation's historically black colleges and universities. I appear before you on behalf of the University of Arkansas at Pine Bluff, where I serve as chancellor.

The University of Arkansas at Pine Bluff and many similar institutions, and the students who attend these institutions, rely heavily upon the resources and support your subcommittee provides. Of particular importance is title III, part B of the Higher Education Act, which focuses on strengthening historically black colleges and universities. These funds can be used for faculty development, rehabilitation and modernization of academic facilities, training and research, and laboratory equipment. These resources have proven critical to the institutions receiving these grants. Consequently, we urge your subcommittee to provide an adequate level of funding, $60 million at the very least, for part B of title III.

Part C of this same title is equally important to institutions who, like the University of Arkansas, make a substantial contribution to educational opportunities for minorities and the poor. Through a matching grants program to establish or increase endowment funds, part C enables institutions to become more financially independent. Obviously, since financial independence is what the University of Arkansas at Pine Bluff and other historically black colleges and universities are striving for, we urge your subcommittee to continue this program at the highest funding level feasible.

Furthermore, of major concern is that the administration's proposed budget reductions in student aid for fiscal year 1988 will have a negative impact on all students seeking to further their educational status. In this regard, the University of Arkansas at Pine Bluff believes that funds for Pell grants, guaranteed student loans, college work-study, and supplemental educational opportunity grants should be restored to a more realistic funding level. Student aid resources provided by your subcommittee are the genuine base of support that allow disadvantaged students to attend our schools.

Finally, the University of Arkansas at Pine Bluff recommends creation of initiatives aimed at strengthening the research infrastructures of educational institutions that offer degrees in the health and technological sciences. Such initiatives are particularly valuable and important in attempts to investigate disease, illness and other technological challenges, and for the training of young clinicians, scientists, and scholars.

Mr. Chairman and members of the subcommittee, thank you for the opportunity to present the views of the University of Arkansas at Pine Bluff. I am happy to answer any questions you may have.

STATEMENT OF DEAN MADELYN L. LOCKHART, DEAN OF GRADUATE STUDIES, UNIVERSITY OF FLORIDA, GAINESVILLE, ASSOCIATION OF AMERICAN UNIVERSITIES AND NATIONAL ASSOCIATE OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

Senator CHILES. We will now hear from Dean Madelyn Lockhart, dean of graduate studies of the international program at the University of Florida.

Ms. LOCKHART. Mr. Chairman, I'm Madelyn Lockhart, dean of graduate studies and dean of international studies and programs at the University of Florida.

I would like to simply emphasize my concern on the questions that you have been listening others talk about today by making two points.

As you are well aware, the majority of the graduate students in some fields of engineering and sciences at the University of Florida, as well as other universities, are from foreign countries, and are supported by their government.

Senator CHILES. And they are also supported by our Government.

Ms. LOCKHART. Yes; some of them are, that is very true.

Senator CHILES. All of them are.

Ms. LOCKHART. Well, we have some that are supported by—well, I see what you are saying.

Senator CHILES. There is about a 40-percent supplement, or that is what I understand from Chancellor Reed, 40 to 45 percent. So they are all supported by our Government.

Ms. LOCKHART. You are quite correct, as are all students. But the fellowships that some foreign governments have provided to their students to study engineering and science have brought many of them to the United States where they can get very good training at our universities.

But I would also like to point out to you that some Federal support for training in humanities and arts and the social sciences is very vital, in my opinion, since many of our programs, research programs and training programs now involve what I call interdisciplinary teams, we find that the physical scientists and biologists can work very much better in their research efforts if they have the cooperation of economists, anthropologists, historians, and so on.

Their team effort is much more productive. And so I would really then like to present very quickly to you four investment opportunities that are included in the Higher Education Act.

Senator Chiles. We are getting a lot of investment opportunities serving on the Budget Committee. I get those all the time. [Laughter.]

Ms. Lockhart. As an economist, I would say these are good opportunities.

First, investment for support of students in all disciplines. I think this will allow us to train and field the interdisciplinary teams that I spoke of. That would be the Javits Fellowship Program and the Graduate Assistance Program in areas of national need.

We have heard about the Harris fellowship program, and I will not go into that at the moment, but I would also like to point out that at the University of Florida, we have two very successful international centers, the Latin American Center, and the African Studies Center.

And these two centers have spillover effects on our campuses. Several thousands of community, faculty, and community people. So they have a chance to participate in a variety of international activities, as well as promote the increase in language study to such languages as Amaura, Swahili, Shona, and so on.

I thank you for the opportunity to talk to you today.

Senator Chiles. Thank you. We are delighted to hear from you today.

[The statement follows:]

STATEMENT OF MADELYN L. LOCKHART

Mr. Chairman and Members of the Subcommittee, I am Madelyn L. Lockhart, Dean of Graduate Studies and Dean of International Studies and Programs at the University of Florida. I thank you for this opportunity to testify on graduate education.

Both Congress and the Administration are examining the economic health of the nation and its deteriorating position in international trade markets. A central component of a resurgence of American competitiveness must be a renewed investment in knowledge and talent.

As we take steps as a nation to strengthen our competitiveness, we must not lose sight of the importance of excellence in the social sciences, humanities, and the arts as well as the sciences. We will need wisdom to incorporate technological changes into our lives thoughtfully. We must continue to examine our future with an informed sense of history. We enrich our lives through exposure to the arts.

Yet federal support for graduate education has declined substantially. Federally funded fellowships and traineeships dropped from approximately 60,000 in 1969 to fewer than 13,000 in 1981. Between 1980 and 1983, the number of full-time science and engineering students receiving federal support declined by approximately 10%. Between 1974 and 1984, the percentage of federal support for graduate and professional students provided as loans increased from 26% to 73%. Less than 2% of the Education Department's nonloan assistance is provided to graduate students.

The proportion of foreign students in our science and engineering graduate programs has increased dramatically. Some of the largest reductions in graduate enrollments have occurred in the arts and humanities. Simply put, we are failing to attract talented U.S. students into graduate programs in sufficient numbers.

I will present our FY 1988 request in terms of four investment objectives in which the Department of Education has a significant role to play.

1. **Support for a "critical mass" of talented graduate students in all disciplines**

It is impossible to specify quantitatively what constitutes a "critical mass" of graduate students, but we know that the intellectual vitality of individual disciplines and of the institutions which house their instructional and research programs is dependent on attracting some portion of the nation's brightest college graduates in all fields to pursue graduate education. Two Title IX fellowship programs address this objective, the currently funded Javits Fellowship program and the newly authorized Graduate Assistance in Areas of National Need.

I cannot emphasize strongly enough the importance of the Javits program to the quality of graduate education in this country. This is the only federal program supporting graduate study in the arts, humanities, and social sciences. The program has demonstrated its effectiveness in encouraging some of the nation's most gifted college graduates to pursue graduate study in these disciplines.

Congress improved the Javits program during the reauthorization of the Higher Education Act to increase the amount of support provided by its fellowships. The program will need an appropriation of $8.25 million in FY 1988 in order to support a new class of students as well as provide continuing support to second- and third-year students under the improved policies.

Graduate Assistance in Areas of National Need is a newly authorized program that effectively complements the Javits program, supporting primarily science and engineering fields through competitive awards for graduate fellowships to high-quality departments.

This program is directly responsive to the challenges confronting this nation in strengthening its international competitiveness. An FY 1988 appropriation of $15 million would permit the support of nearly 1000 students in 40 or more graduate departments.

2. Elimination of underrepresentation by minorities and women

Reversing the underrepresentation of minorities and women in graduate education must be a central part of a national reinvestment strategy. The Harris Fellowship program, formerly known as the Graduate and Professional Opportunities Program, is specifically designed to address the serious underrepresentation of Blacks, Hispanics, and Native Americans in virtually all fields and the underrepresentation of women in science and engineering fields and the professions.

Congress substantially strengthened this program during reauthorization, principally by increasing its unrealistically low stipend to a level comparable to that provided by other fellowship programs. To conduct the program under these newly authorized policies will require increased federal funding. An FY 1988 appropriation of $19.5 million would provide fellowships under the improved program policies at the existing program size of approximately 1300 new and continuing students.

During reauthorization, Congress enacted a new Title IX program, Grants to Institutions to Encourage Minority Participation in Graduate Education. This program would provide grants to institutions to support summer research internships and related educational experiences for talented undergraduate students from minority groups underrepresented in graduate education. An FY 1988 appropriation of $5 million would support between 500 and 600 students at about 50 institutions.

3. Strengthening our national capacity in foreign languages and area and international studies

The international conditions that gave rise to the need for a strong national capacity in foreign languages and international studies have only intensified. Success in this environment requires advanced and broadly based competence in the languages of the world and knowledge of the cultures and social arrangements of those with whom we cooperate and compete.

In reauthorizing the Higher Education Act last fall and in developing trade legislation currently, Congress has added important new programs to Title VI, reflecting its recognition that language and area studies break down the linguistic and cultural barriers which impede productive relationships across national boundaries.

We ask that you provide $41 million for Title VI. This would provide a current services level of funding of $34 million for existing programs and $7 million for three new programs--the second tier of fellowships for advanced graduate students, intensive summer language institutes, and language resource centers.

4. Support for the academic infrastructure

The need for modernization of academic research and instructional facilities is spread throughout higher education. Virtually the only support currently provided by the federal government is through special appropriations responding to the needs of individual institutions. What is needed is a national policy which addresses facilities needs systematically through federal programs in which all institutions have a fair opportunity to compete.

We understand that consideration is being given to providing funding for the College Construction Loan Insurance Association in the FY 1987 supplemental bill. We urge you to provide such funding.

The academic and research facilities grant programs of Title VII are an important part of the federal investment. We ask that you provide $100 million for undergraduate and graduate facilities in FY 1988.

Libraries: On any campus, the library is one of the most important facilities for both teaching and research. Title II-C has provided competitively funded grants to libraries for collections development, bibliographic control, and preservation. We request that you provide $7 million for this program in FY 1988 to help meet the rapidly expanding demands on research libraries.

During the HEA reauthorization, Congress added a significant new program to Title II--College Library Technology and Cooperation Grants. This program authorizes the Department of Education to make grants to institutions to acquire technological equipment to provide expanded access to national bibliographic databases and to conduct research and demonstration projects to enhance library and information sciences. We ask that you provide funding sufficient to begin this timely new program.

In closing, I call your attention to the importance to graduate students of three programs provided through Title IV: College Work-Study, the Guaranteed Student Loan program, and the Perkins Loan program. We support the testimony of the American Council on Education with respect to these programs. I only add that College Work-Study provides particularly effective support for graduate students involved in teaching and research activities that are closely related to the students' educational objectives.

Mr. Chairman, graduate students, who are the critical link between yesterday's college students and tomorrow's college and university faculties, are part of this country's most valuable human resources. I am convinced that the funds we have asked Congress to provide will repay the nation far in excess of the dollars expended. Thank you for this opportunity to appear before you.

STATEMENT OF DR. G.W. MINGO, DIRECTOR, STUDENT SUPPORT SERVICES AND UPWARD BOUND PROGRAM

Senator CHILES. Now we will hear from G.W. Mingo, director of student support services at the University of Florida.

Dr. MINGO. Thank you very much, Mr. Chairman, and members of the subcommittee. I appreciate the opportunity to testify before you today.

I especially appreciate the opportunity to voice my support for the continuation and expansion of special programs for students of different backgrounds.

My name is G.W. Mingo. I have been the director of the Student Support Services Program and the Upward Bound Program at the University of Florida since 1974.

I am a native of Key West, FL, and a graduate of both Florida A&M University and the University of Florida.

In my testimony today I would like to make three points. First, the level of new level funding has eroded TRIO programs over the past 7 years.

Second, for large numbers of minorities and first generation students, TRIO programs provide the only mechanism available for short access and success in higher education.

Third, TRIO's staff have identified successful models for improving mathematics and science achievement for targeted populations, but limited resources prevent implementation of these model programs on a widespread basis.

Erosion of TRIO services: It has been estimated by NCOA that the accumulative total of over 110,000 students have been deprived of TRIO in the past 7 years. For example, in all of southern Florida, only one Upward Bound Program exists at the University of Miami, and it serves 80 students out of a pool of approximately 32,000 eligible students in Dade County alone.

My own Upward Bound project at the University of Florida only serves 80 students out of a pool of approximately 2,400 students from Alachua County.

Since the project's inception in 1971, we have been able to place 87 percent of these students in the college or university of their choice. Now, when the parents from the surrounding counties hear about the successes of the students in Alachua County, they come inquiring about participation in our project.

But it is very sad and unfortunate that we cannot help these students. There is a great need in that Sixth Congressional District. The crisis of minority enrollment, which is a point that has been discussed——

Senator CHILES. So you are saying there is only one other Upward Bound Program like you're doing at the University of Miami?

Dr. MINGO. In that Dade County area, that is the only one in there. And for instance, in the Sixth Congressional District, our Marion, Putnam, and all the other counties in there, we're the only one in that county. And we only serve Alachua County.

Senator CHILES. Are there others in other counties?

Dr. MINGO. There are a total of eight Upward Bound programs in the State of Florida. And we do not cover the State of Florida, as you know.

Florida is growing by leaps and bounds, especially counties. Just south of us, Marion County, one of the fastest in the Nation. And we have a real critical need for this type of program to increase or provide that conduit for the students that are getting into college, especially from the minority and low-income families.

The crisis in enrollment, minority enrollment, as we see it, TRIO programs have served to increase this minority enrollment by providing information and assistance to students in preparing them for admission, and by also encouraging and supporting them during their college enrollments.

For example, at the University of Florida again, we are able to retain approximately 80 percent or more of our students over a 2-year period. And the graduation rate parallels that of regularly admitted students. And we can increase the number of student graduates by having increased funds.

Mathematics and achievement, we're talking about providing the students in those areas. But because of the eroding services that we have as a result of decreased funding, we are not able to provide the students in the area of math and sciences.

However, at the University of Florida, again, to give you an example, incorporation of the physics department there, we are able to initiate biology, chemistry, and physics programs for these low-income students, and the programs are taught in such a manner that they are highly motivated.

As a result, we are able to produce pharmacy students, engineers, and chemists. Walker left, but we had a student come out of his program at Florida A&M. Now recognizing the acute shortage of minority scientists and engineers, the National Council of Educational Opportunity recently identified a competition to identify model mathematics and science components in Upward Bound, and published some monographs documenting those efforts.

But because of low funding, these programs cannot be implemented and improved without substantial new funding. Accordingly, the NCOA is seeking such a substantial increase in funding for fiscal year 1988.

PREPARED STATEMENT

I appreciate the opportunity to testify before you today, and I would be pleased to answer any questions you might have at this time.

[The statement follows:]

STATEMENT OF DR. G.W. MINGO

Mr. Chairman, Members of the Subcommittee, I appreciate the opportunity to testify before you today. I especially appreciate the opportunity to voice my support for the continuation and expansion of the Special Programs for Students from Disadvantaged Backgrounds. Over 400,000 students nationally are enrolled in the TRIO programs. TRIO provides postsecondary educational opportunties to 7,990 disadvantaged youth and adults in Florida.

My name is G.W. Mingo and I have been the Director of the Student Support Services Program and the Upward Bound Program at the University of Florida since 1974. I am a native of Key West Florida and a graduate of both Florida A&M University and the University of Florida. I have spent all of my life in Florida, with the exception of the seven years that I spent as a Field Artillery officer with the U.S. Army in Europe and Southeast Asia.

In my testimony today, I would like to make three points. First, level or near level funding, has eroded the TRIO programs over the past seven years. Secondly, for large numbers of minority and other first-generation students, TRIO programs provide the only mechanism available to assure access and success in higher education. Third, TRIO staffs have identified successful models for improving mathematics and science achievement for the targetted population but limited resources prevent implementation of these models on a widespead basis.

The Erosion in TRIO Services

In fiscal 1980, the Department of Education reported that the TRIO programs served a total of 528,414 students. At that time, Educational Opportunity Centers served 117,100 students; Student Support Services 172,071 students; Talent Search 202,033; and Upward Bound 37,210. The Department also reported at that time, that 41% of these students were Black, that 35% were white, that 17% were Hispanic, that 4% were Native

American, and that 3% were Asian. Since 1983, the Department has not compiled records of students served. However, based on actual attrition of students served between fiscal year 1980 and fiscal year 1983, and by extrapolating from these figures to fiscal year 1984 through fiscal year 1987 on the basis of decreased appropriations in real dollar terms during these years, the NCEOA estimates that a cumulative total of over 110,000 students have been deprived of TRIO services over the seven year period.

In Florida, for example, programs at St. Petersburg Junior College, Florida Memorial College, Eckerd College and the University of West Florida have been eliminated and despite the fact that we are the fastest growing state in the country, only two new projects have been added in the past seven years. Moreover, individual projects have also been forced to cut back on the number of students they enroll and many sections of the state remain unserved. In all of southern Florida, for example, only one Upward Bound project exists--at the University of Miami. It serves only eighty students out of a pool of approximately 32,000 eligible students in Dade County alone.

My own Upward Bound Project serves only eighty students out of a pool of approximately 2400 eligible students from Alachua County. Since the project's inception in 1971, we have been able to place 87% of our students in the college of their choice. When parents and students in the surrounding counties hear of the successes of the Alachua County students they inquire about participation in our project. It is very sad and unfortunate that we cannot help these students.

The Crisis in Minority Enrollment

However, as disturbing as diminished student enrollment in TRIO programs may be, there is another side to the TRIO picture which is equally disturbing. The American Council on Education reported in October of 1986 in a survey of all higher education institutions that TRIO programs were among the three most utilized methods for recruiting minority and other disadvantaged students.

TRIO is the only federally funded mechanism mentioned in that survey available for this purpose. Thus, over the past seven years, the federal government has been slowly dismantling its only mechanism for increasing minority and low-income enrollment despite the fact that every study in the last four years has pointed out declines in enrollment for these populations. For example on April 19, the New York Times utilized a front page article to comment on this crisis.

And you know from first hand experience, the issue of minority enrollment is a critical one in Florida. In 1980, Blacks made up 23% of the public school enrollment in Florida while Hispanics made up 7.9%. Yet both in absolute numbers and in percentage terms, minority enrollment in both two and four year schools in the state is declining. At two year schools, for example, the percentage of Black students enrolled fell from 10.2% in 1980 to 8.8% in 1984. At four year schools, the percentage declined from 10.4% to 9.1%. At the University of Florida, it remains below 6%.

TRIO programs serve to increase minority enrollment not only by providing information and assistance to students preparing for admission, but also by encouraging and supporting them during their college enrollment. For example, at the University of Florida, 80% of the Student Support Services students are retained for at least two years, and our graduation rate parallels that of regularly admitted students.

Mathematics and Science Achievement

In addition to eroding services designed to aid recruitment and retention of minority students, near level funding has also prevented TRIO programs from doing all that they can to incorporate practices which will aid in increasing our country's competitiveness. With one of three adolescents now from minority backgrounds, and with one out of four from low-income families, it is clear that the competitiveness issue is tied to mathematics and science achievement of minority and low-income youth. And, it is also clear that Upward Bound and Special Services have much to contribute in this area.

If two percent of the students in Upward Bound this year for instance, are given the skills and motivation to earn a bachelor's degree in the physical sciences, TRIO will have produced a number of baccalaureates in these areas equal to the total number of bachelors degrees awarded to minorities in the pysical sciences in any recent year. If two percent of the minority students in Special Services could be assisted in earning a bachelor's degree in engineering, minority Special Services graduates would account for a number of engineers equaling the total number of minority engineers graduating in any recent year.

A 1983, Natural Science Foundation study focusing on pre-college education found that for any science and technology education program to succeed it must include among its objectives science and technology instruction designed to produce seven outcomes. In cooperation with the Physics Department at the University for example, my Upward Bound program initiated biology, chemistry and physics courses for low-income and minority high school students designed to address these objectives. As a result of our Upward Bound science program, several students from rural Alachua county are now pharmacists, engineers and chemists.

Recognizing the acute shortages of minority scientists and engineers, the National Council of Educational Opportunity Associations recently conducted a competition to identify model mathematics and science components in Upward Bound and pubished the enclosed monographs documenting those efforts. But, of course, TRIO programs cannot implement these improved techniques without substantial new funds. Accordingly, the NCEOA is seeking such a substantial funding increase for FY 1988.

I appreciate the opportunity to testify before you today and would be pleased to answer any questions you might have.

Senator CHILES. Thank you. How much does it cost to operate your TRIO Program?

Dr. MINGO. I'm funded at a level of $148,000 for the Upward Bound Program. I could use $170,000 plus.

Senator CHILES. So $140,000, you're using those funds for other than placing these 80 students that you placed?

Dr. MINGO. That is used for salaries, supplies, textbooks, and tuition fees that we have to pay for the students.

Senator CHILES. Thank you.

Dr. MINGO. Thank you very much.

STATEMENT OF EILEEN D. COOKE, AMERICAN LIBRARY ASSOCIATION

Senator CHILES. We appreciate your testimony. Now we will hear from Eileen D. Cooke of the American Library Association.

Ms. COOKE. Thank you. I represent the American Library Association. I appreciate the opportunity to be heard.

I want to thank you, particularly, and the members of this committee, for preserving our Federal library programs over the past 5 years.

Senator CHILES. We intend to continue that.

Ms. COOKE. Thank you. We are very pleased to hear that. The last page of my testimony has our recommendations. The righthand column represents current services level, and then I would like to emphasize the three programs under the Higher Education Act, which was reauthorized last fall.

The title II–A program was unfunded by this committee, urging us to try to get a need criteria. Finally, this was accomplished under the new Higher Education Act, and we are urging that that program particularly be funded, along with a new technology title, to help support some of the things you have heard this afternoon, with students needing to get into scientific fields and do research.

If they do not have adequate library resources, they are in trouble. Many libraries around the country have to stop buying books in favor of keeping periodical subscriptions up.

The new title VI of the Higher Education Act would help libraries acquire foreign periodicals. We find that two-thirds of basic research is done abroad these days, and so if we are going to develop that competitive edge, we do need to have our students have access to new materials, and the materials——

Senator CHILES. Two-thirds of basic research?

Ms. COOKE. It is astonishing.

Senator CHILES. I have never heard that figure used before.

Ms. COOKE. If you would like me to expand on it?

Senator CHILES. The Japanese would say, they do not do any basic research. Where is it done?

Ms. COOKE. I think much of it in Europe, and with their perfecting, the Japanese are beginning to catch up. They are not just copying.

Senator CHILES. I know they are doing a lot of applied research, but I did not think they were doing much in the way of basic research.

Ms. COOKE. If you would like me to get more material on that for the record, I would be glad to do that.

Senator CHILES. Please do so.

Ms. COOKE. The other problem is, much of the scientific discovery and information in general——

Senator CHILES. Do we have anybody that can read these foreign periodicals?

Ms. COOKE. That is a good question.

Senator CHILES. It is a very real question.

Ms. COOKE. The Japanese Technical Services Act that was passed last year authorized $1 million to help translate materials. We find the Japanese have something like 5,700 people in Japan that do nothing but translate American material for their scientists to use, but that we have very little in this country.

And there is a provision in the new trade bill. But the technology, I just wanted to make this point: Much of the material that is becoming available, isn't even in print any longer, and is available only in electronic format.

And so having a new title VI funding would be very helpful in helping the institutions acquire some of the hardware.

Thank you again for the opportunity to testify.

[The statement follows:]

STATEMENT OF EILEEN D. COOKE

My name is Eileen D. Cooke. I am Associate Executive Director of the American Library Association and Director of its Washington Office. ALA is a nonprofit educational organization of nearly 44,000 librarians, trustees, educators, and other friends of libraries dedicated to the improvement of library services.

The library community is very grateful to this Subcommittee for having rejected for five years in a row the President's proposals to eliminate all federal library programs. As you did last year, you have already rejected the President's further proposal to rescind or defund all FY 1987 library grant funds not previously allocated. We thank you for this and ask you to again reject the Administration's sixth zero budget for libraries for FY 1988.

This is my first opportunity to discuss the Higher Education Act library programs that were newly revised and extended last year. My most urgent message today is to ask you to consider funding for those HEA programs, three of which are currently unfunded.

The HEA II-A College Library Resources grants were amended to target grants to the neediest academic libraries, as recommended by this Subcommittee, which provided no funding since FY 1983. Under criteria developed by the academic library community, grants of between $2,000 and $10,000 depending on enrollment range would go to libraries ranking below the norm in their institutional class when scored for both materials expenditures per student and volumes held per student. Maintenance of effort requirements are continued. Limited funding would result in fewer, not smaller, grants to the most needy.

Why fund II-A in a tight budget year? Continuing inflation in the cost of books and journals combined with rapid and continuing growth in publications means that most libraries are falling behind in acquisitions. The latest Carnegie report on the undergraduate college recommended increased support for the purchase of library materials. Technical publishing output has been rising more than 20 percent per year. Since 1967 when the average book and journal each cost about $8.00, the cost of printed materials has generally risen faster than the consumer price index. The average hardback book cost $31.21 in 1986 and has stabilized in recent years, but the average periodical cost $65 in 1986, a nine percent increase in one year, way over the CPI of 1.9

percent. Libraries spend over half their acquisitions budget on journals, having gradually shifted from books, but still cannot keep up.

HEA II-B has been at $1 million or less for several years. The number of minority students enrolled in library schools has dropped more than 40 percent since 1979, due mainly to decreased funds for II-B. Given the nation's changing demographics, this trend must not be allowed to continue if our fast-growing minority populations are to receive effective library service.

HEA II-C has also been at its current funding of $6 million or less for the last several years. It is one of the few federal programs which helps to preserve research library materials. Inexpensive paper developed in the mid-19th century made possible large scale distribution of publications, but the acid paper used since then deteriorates rapidly. About one-fourth of research library collections are at risk, that is, so embrittled that they will soon become useless. To save one-third of the titles at risk (or 3.3 million volumes over 20 years) would require about $384 million for preservation microfilming according to a recent report of the Council on Library Resources. For this reason alone, II-C funding should be increased.

HEA II-D, newly authorized, would provide grants to higher education institutions for technological equipment necessary for sharing of library resources, joint-use library facilities and equipment, and special needs in utilizing technology to enhance library or information science. Minimum grants are $15,000 for up to three years with a one-third matching requirement.

The goal of a nationwide network of information resources in support of scholarship, research and development is strengthened with each library that participates. Much of the latest information needed by students, faculty, researchers, scientists, and business persons is available only in electronic form. Capitalization costs pose a significant barrier to the ability of many academic libraries to take full advantage of technological applications.

Recognizing the connection between information and competitiveness, the House Education and Labor Committee, in approving HR 90, the Education and Training for American Competitiveness Act, provided an additional $5 million in the II-D authorization to enable libraries to participate more fully in competitiveness initiatives. The 1987 Carnegie Foundation report on the undergraduate college recommended that every college and university "link its library to one or more computer-based networks."

Last year's HEA amendments also authorized $1 million under the HEA VI International Education programs for grants to higher education institutions or consortia with international collection strengths for acquisition of and provision of access to periodicals published outside the U.S.

Increased prices, the weakened U.S. dollar, small print runs, and an underdeveloped bibliographic structure in many countries make acquisition of foreign periodicals difficult and costly. These resources are essential for U.S. research and development. It is now estimated that only one-third of basic science takes place in the U.S. New York University is experiencing a 40 percent average increase in foreign journal prices. NYU also notes the growing practice of some European publishers of establishing higher prices for U.S. customers. Such differentials range from 16 to 114 percent.

As you consider the Library Services and Construction Act, keep in mind that the Administration's proposed zero budget would inflict a double whammy on the nation's public libraries. The abrupt withdrawal in FY 1987 of over $4 billion in general revenue sharing funds is already having a devastating effect on public libraries. In FY 1984, the most recent year for which a specific breakdown of funds is available, libraries received 1.7 percent of revenue sharing funds, or $76.7 million.

In some localities, revenue sharing was a major source of support. For instance, in Pennsylvania, 14 percent of local support or nine percent of overall support for public libraries came from revenue sharing. Over 50 percent of Pennsylvania libraries received some revenue sharing funds; and of those receiving revenue sharing monies, more than half received 25 percent or more of local support from this federal program.

Where local ability to support public libraries is limited, as in West Virginia, revenue sharing was a lifeline. Over 50 percent of public library support in West Virginia is from state and federal funds such as LSCA. Revenue sharing represented about 24 percent of local library support. Without it, 63 libraries (of about 100 in the state) have lost a total of $757,000. One county library closed completely from last July 1 to October 15; another closed for several days in January.

More closures are expected for two reasons: 1) Most local governments in the state do not have enough revenues coming in to replace the lost funds; and 2) Due to the state's current fiscal emergency, state aid is being cut 20 percent in the last quarter of this fiscal year, and probably by 20 percent in the upcoming fiscal year. The amount the state's libraries have lost in revenue sharing funds is about equal to West Virginia's LSCA I allocation---$750,000. Imagine how the tragedy would be compounded if LSCA funds were also eliminated, as the Administration proposes.

The Administration's budget requests a $22 million increase in Adult Education Act funding to the states as evidence of its commitment to reduce adult illiteracy. However, the same budget would eliminate LSCA I which includes about $7 million devoted to literacy efforts, as well as LSCA VI with $5 million for literacy programs. In addition, the Department of Education's Adult Literacy Initiative estimates that $147 million in Vocational Education Act funds are used for literacy efforts, plus $1 million in College Work Study. Both these programs are also zero budgeted by the Administration. So the $22 million increase looks more like a $138 million cut.

Meanwhile, 9,000 people in New York City are on waiting lists for adult literacy training, and must wait about 15 months to learn to read. A New York State legislator estimates that every $1 spent on literacy training brings in $1.89 in new tax revenues through new and better jobs.

We are pleased to note that the Administration has recommended an increase in the budget of the National Commission on Libraries and Information Science. We strongly support the budget request for this small but effective agency. NCLIS would be the administrative agency for a White House Conference on Library and Information Services, for which authorizing legislation (H.J.Res. 90 and S.J.Res. 26) is pending.

The attached summary of ALA's appropriations recommendations indicates the full list of programs under your Subcommittee's jurisdiction which provide direct benefits to libraries. Our recommendations, for the most part, reflect the amounts needed to continue the current level of services provided under each program.

Thank you for the opportunity to present the views of the American Library Association.

SUMMARY OF AMERICAN LIBRARY ASSOCIATION APPROPRIATIONS RECOMMENDATIONS
FY 1988 Labor-HHS-Education Appropriations

Library Programs	FY 1987 Appropriation	FY 1987 Rescission Proposal[1]	FY 1988 Authorization	FY 1988 Reagan Request	FY 1988 ALA Recommendation[2]
Library Services & Construction Act TOTAL	$125,500,000	-$27,500,000	$181,000,000	-0-	$132,525,000
Title I, Pub. Lib. Services	80,000,000	-	90,000,000	-0-	84,000,000
II, Pub. Lib. Construction	22,500,000	-22,500,000	50,000,000	-0-	23,625,000
III, Interlib. Coop.	18,000,000	-	35,000,000	-0-	18,900,000
IV, Indian Libraries	(funded at 2% setaside of appropriations for LSCA I, II, & III)				
V, Foreign Lang. Materials	-0-	-	1,000,000	-0-	1,000,000
VI, Library Literacy	5,000,000	-5,000,000	5,000,000	-0-	5,000,000
Higher Education Act TOTAL	$ 7,000,000	-$7,000,000	such sums	-0-	$ 23,350,000
Title II-A, College Lib. Resources	-0-	-	such sums	-0-	10,000,000[3]
II-B, Training, Research	1,000,000	-1,000,000	such sums	-0-	1,050,000
II-C, Research Libraries	6,000,000	-6,000,000	such sums	-0-	6,300,000
II-D, Technology	-0-	-	such sums	-0-	5,000,000[3]
VI, Sec. 607 Foreign Periodicals	-0-	-	such sums	-0-	1,000,000[3]
Education Consolidation & Improvement Act Chapter 2 El/Sec Educ. State Block Grant[4]	529,337,000	-	such sums	529,337,000	555,804,000
National Commission on Libraries & Info. Science	660,000	-	750,000	791,000	791,000
Center for Education Statistics (incl. library surveys)	8,900,000	-	not less than 8,750,000	13,700,000	13,700,000
Natl. Library of Medicine (incl. Medical Library Asst. Act)	61,838,000	-	such sums	64,399,000	64,930,000

[1] Congress rejected the Administration's rescission proposals for library programs.

[2] ALA generally recommends funding at amounts required to maintain the current level of services according to the Congressional Budget Office.

[3] For currently unfunded HEA library programs, ALA recommends amounts authorized for FY 1987.

[4] Forward funded consolidation of 32 programs incl. former ESEA IV-B School Library Resources and Instruct. Equipment.

Senator CHILES. Thank you. Now we will hear from Nina Root of the Associated Natural Science Institutions.

STATEMENT OF JUDITH WARTMAN, DIRECTOR, ASSOCIATED NATURAL SCIENCE INSTITUTIONS

Ms. WARTMAN. Mr. Chairman, Nina Root had to take a plane back to New York. I am Judith Wartman, director of the Associated Natural Science Institutions.

The consortium that I am speaking for includes the New York Botanical Gardens, the American Museum of Natural History, the Philadelphia Academy of Sciences, the field museum in Chicago, the California Academy of Sciences, the Los Angeles County Museum of Natural History, and the Missouri Botanical Gardens.

And we would like to specifically address title II–C and D library programs. We have approximately 1.5 million volumes in our libraries, and we service about 30,000 researchers, and about 5,000 institutions annually.

Without title II–C support, our libraries would not have been able to join the national library on-line computerized network. Or it preserved catalog or made accessible important research collections.

We ask that an increase in funding be provided to title II–C to about $10 million in order to provide continuing research, grants, and multiyear awards, and to permit more institutions, including smaller institutions, to participate in the program.

It is quite expensive to maintain library collections. We estimate that cataloging a title costs about $35. To rebind a book costs about $16. And to restore an entire volume costs somewhere between $50 and $70 per hour.

The only opportunity for research libraries to get the kind of support they need is title II–C, and now the new title II–B.

PREPARED STATEMENT

And I was heartened by your comment to Eileen Cooke that you are going to continue to support those programs, and we encourage that.

[The statement follows:]

STATEMENT OF NINA J. ROOT, CHAIRWOMAN, DEPARTMENT OF LIBRARY SERVICES, AMERICAN MUSEUM OF NATURAL HISTORY

I represent the libraries of The Associated Natural Science Institutions (TANSI), an organization of seven natural history museums: The Academy of Natural Sciences of Philadelphia, the American Museum of Natural History, the California Academy of Science, the Field Museum of Natural History, the Missouri Botanical Garden, the Natural History Museum of Los Angeles County, and the New York Botanical Garden. Together the library collections of these seven institutions cover the literature of the world's plants, animals, and minerals from the beginning of printing to the present. The seven TANSI research libraries represent the major resource for the study of evolution, ecology, the environment, the development of our planet, and the history of humankind. We serve not only the scientific staffs of our museums, but an international community of scientists and scholars, as well as the general public and students. Each year we serve over 30,000 researchers and distribute our scientific publications to some 5,000 institutions.

The libraries' collections total over 1,500,000 volumes plus manuscripts, archives, photographs, films, art works, recordings, and maps covering a broad range of subjects from anthropology through zoology. Together, these libraries form the finest and most extensive collection for research in systematics in the New World. These collections are important and necessary adjuncts to the scientific laboratories, and specimen and artifact collections used by the international scientific community in their researches.

Both natural science collections and libraries provide a record of past and present life on this planet. Unlike the technical sciences that rely principally on recent literature, systematists (those who collect, identify, catalog and study biological materials) and anthropologists must have access to the earliest materials that document the first observations of people, flora and fauna. The half-life of systematics literature is 150 years as opposed to 5-10 years for technical literature. Therefore, we believe it is our responsibility to collect, catalog, and preserve the historical and intellectual record of the natural sciences for future generations, while we are serving present researchers. However, because we are non-profit privately funded institutions, funds are rarely available for the curation of older collections. Yet, if older and unique collections of books, journals, manuscripts, and visuals are not cataloged and conserved, they cannot be made available to researchers or preserved for the future.

With previous Title II-C grants the TANSI libraries have been able to disseminate information about their collections internationally through automated library networks and published catalogs, and to preserve and make accessible historical collections of films, manuscripts, and photographs. The Missouri and New York Botanical Gardens have almost finished entering their valuable collections of plant science literature into the OCLC library network; the Academy of Natural Sciences has preserved and cataloged its unique collection of expedition films and photographs; the American Museum of Natural History has entered its post-1960 cataloged collection into OCLC and has preserved and cataloged its extensive film, photographic and manuscript materials that document peoples and animals now extinct. Without the support of Title II-C these libraries could not have joined the OCLC network, preserved and cataloged these important collections, and made them accessible to scholars.

It must be remembered that smaller research libraries hold important collections that add immeasurably to scholarly and research endeavors, and they too should be given the opportunity to compete for HEA grants, since much work remains to be done. Each of the TANSI libraries has important collections of rare books, archives, manuscripts of earlier scientists, records of explorations, and art works yet to be cataloged, preserved and made accessible. Without continued support from Title II-C these collections will simply disintegrate and be lost to future generations. Deterioration is not restricted solely to older materials; modern paper and bindings are deteriorating at faster rates than those of books published in the sixteenth century. Studies show that 90 percent of the books published between 1900 and 1939 will not survive to the year 2000. Archives and manuscripts are embrittled, microfilm is drying out, color slides are fading, and motion pictures from the 1920s and 1930s are crumbling to dust.

Substantial funding is needed in order to increase the number of institutions that annually receive grant support, and to once again permit the granting of substantial awards. Automation is today a necessary and expensive tool; cataloging one title costs about $35.00; rebinding a volume costs $11.00 plus $5.00 of staff time; and restoration is estimated at $50-70.00 per hour.

Research libraries have no other source of funding for special projects and automation except the Title II-C and D programs. Title II-C has provided research libraries with the funds necessary to catalog, preserve and make accessible our historical and scientific heritage, but the work is not yet done. The library projects funded by USDE serve the entire nation, and the work must be continued until every valuable collection is assured a future.

STATEMENT OF HOWARD J. SILVER, ASSOCIATE DIRECTOR FOR GOVERNMENT RELATIONS, CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

Senator CHILES. Now we will hear from Howard Silver of the Consortium of Social Science Associations.

Mr. SILVER. My name is Howard Silver, and I am the associate director for Government relations of the Consortium of Social Science Associations. We represent 185,000 scientists across a wide range of behavioral and social science disciplines.

A list of our members is attached to my testimony.

We strongly urge the subcommittee to support the full budget request of $70.2 million for educational research and statistics in the Office of Educational Research in the Department, and improvement of the Department of Education.

We also strongly support continued funding for programs in national education and graduate education. The administration's request abolishes the two programs; it is shortsighted, and their arguments are spurious.

As the Nation moves toward improving its competitive situation in the world, it is imperative that funding for these programs be supported as part of any economic budget.

As former Tennessee Gov. Lamar Alexander recently noted, parents, policymakers, professionals, and other taxpayers need timely factual information of what students know and do. This is essential if our Nation is to plan well and achieve its goal of better schools, better jobs, and a stronger people.

Supporting the conduct of education research and collecting education statistics is an acknowledged Federal responsibility who would limit the National Government's role in other areas of education.

Last year the reauthorization of the Higher Education Act included specific language authorizing field initiated research—education research studies. The conference committee said that we believe there is a growing need for independent research, and drew this new emphasis. It is hoped that important new avenues of inquiry and contributions to the field of education research will be provided.

The proposed budget for fiscal 1988 includes $1 million for field initiated educational research. It is a very modest sum. Yet failure to appropriate the full amount would probably endanger even this small increase.

Last year there were 346 applicants to the field initiated research program. Because of funding limitations, only 10 were able to receive funding.

Let me also note: A government that believes education to be a significant key to the future economic health and security of the country correctly funds education data collection analysis and dissemination at one-fourteenth of its labor statistics activity, and one-fifth of its health statistics activity.

The $21.2 million requested budget for the Center for Educational Statistics will support the desperately needed repair of the Nation's education data base.

We also support the continued funding, as I said before, of the International Education Program. Common sense tells us that foreign language and area student expertise is a requisite to dealing effectively with the increasing internationalization of the economy.

Without Federal support in the past, we would be in a far worse situation than we are today.

In addition, funding for the programs in title IX must be maintained. All these programs provide assistance to graduate and professional students in need, not provided in any other programs.

In order to continue training our best and brightest students to take on the tasks of tomorrow, the administration's request to abolish these programs must also be rejected.

PREPARED STATEMENT

I thank you for the opportunity to present our views.

[The statement follows:]

STATEMENT OF HOWARD J. SILVER

Mr. Chairman and Members of the Subcommittee. My name is Howard Silver and I am the Associate Director for Government Relations of the Consortium of Social Science Associations (COSSA). COSSA represents 185,000 American scientists across the wide range of social and behavioral science disciplines. It functions as a bridge between the research community and the Washington community. A list of COSSA's Members, Affiliates, and Contributors is attached.

COSSA strongly urges the Subcommittee to support the full budget request of $70. 2 million for education research and statistics in the Office of Educational Research and Improvement in the Department of Education. We also strongly support continued funding for programs in international education (Title VI of the Higher Education Act) and graduate education (Title IX of the Higher Education Act). The administration's request to abolish these programs is short-sighted and their arguments spurious.

Public interest in education is enormous. As the nation moves toward improving its competitive situation in the world it is imperative that education funding remain a cornerstone of any strategy. The education programs we support should be part of any economic power budget. As former Tennessee Governor Lamar Alexander recently noted in his transmittal letter to the Secretary of Education of the report The Nation's Report Card: "Parents, policymakers, professionals, and other taxpayers need timely, factual information on what students know and can do. This is essential if our nation is to plan well and achieve its goals of better schools, better jobs, and a stronger people.... Decision-makers need to see the facts clearly. They must make sense of a storm of confusing data and help lead the way to better schools."

States and localities have indicated a willingness to implement programs and solutions to solving the education problems emphasized by A Nation at Risk and the many other assessments of our nation's educational system which followed its publication in 1983. Yet the states and localities cannot do it alone. They need support from the federal government, particularly in the education research and statistics, international education and graduate education programs.

Supporting the conduct of education research and collecting education statistics is an acknowledged federal responsibility, even by those who would limit the national government's role in other areas of education. COSSA was pleased last year when the reauthorization of the Higher Education Act included specific language authorizing field initiated education research studies. For too long and because of insufficient funds, too large a share of the education research support from the federal government went to the labs and centers. It has been demonstrated time and again that fundamental research is often best developed by scientists who develop their own ideas of what research should be conducted. As the Conference Committee report on the Higher Education Amendments of 1986 noted:

> In recent years there has been a sharp decline in support for research activities outside of the work conducted by the educational labs and centers. This decline suggests that sparse and less diverse information will be available on which to base future decisions about education. The Committee believes there is a growing need for independent research and through this new emphasis, it is hoped that important new avenues of inquiry and contributions to the field of educational research will be provided.

The proposed budget for FY 1988 includes $1 million for field initiated educational research, $500,000 above the floor set in the authorization bill. This is a very modest sum compared to the support for the labs and centers. Yet failure to appropriate the full amount for OERI would probably endanger even this small increase since the labs and centers have funding floors that also must be met. Last year there were 346 applicants for the field-initiated research program, of whom, because of funding limitations, only ten were able to receive funding.

The reform activities of the past few years evolved from the results of research done in previous years. The National Commission on Excellence in Education, which produced A Nation at Risk, relied on 41 commissioned papers, many of them research reviews, to develop its report and recommendations for reform. What Works, a Department of Education publication which provides practical knowledge to help in the education of our children, is also based on many years of research on teaching and learning. We need to maintain support for research that will generate new knowledge that will address the educational problems that will confront us in the future.

Continuing assessments of the reforms generated by A Nation at Risk requires support from a federal government that has the responsibility to ensure it has the best possible information about the impact and success of these reforms. This is also true for knowledge about: new methods of teaching basic and useful skills to our young people; successful teaching and learning strategies to keep them from dropping out; examination of other nation's educational systems and the transfer of useful techniques; optimal methods of retraining our older citizens; and most important of all, making our children productive citizens of the 21st century. We urge you to appropriate the full request for the Office of Educational Research and Improvement.

It is interesting to note that a government that believes education to be a significant key to the future economic health and security of this country currently funds collection of education data collection, analysis and dissemination at 1/14th of its labor statistics activity and 1/5th of its health statistics activity.

The requested budget for the Center for Education Statistics (CES) will support the desperately needed repair of the nation's education data base. The report, Creating a Center for Education Statistics: A Time for Action, issued by a National Research

Council panel last year deplored the record of the Center for its past performance and urged much needed reforms in the way CES conducts business. We believe that under the able direction of Emerson Elliott CES is responding to the criticisms in a positive way. Yet it is clear that budgetary constraints have kept CES from fully implementing its plans to improve the collection, analysis, and dissemination of data vital to aid our nation's education policymakers. The need to obtain an accurate picture of our nation's schools and colleges is fundamental to making them part of the answer to renewed economic power.

The $21.6 million slated for CES in the proposed FY 1988 budget will go toward further implementation of the redesigned elementary and secondary school data set. It will also provide funding for the School and Staff survey that will discover comprehensive information on the characteristics of schools and their teachers. Questions regarding who enters teaching and who leaves and why will be addressed. Furthermore, the increased funding will allow for a follow-up of the new longitudinal survey of 8th graders which is providing information on the effects of high school and the causes of dropping out. The National Assessment of Educational Progress (NAEP) will also receive additional resources to upgrade its utility and to begin the implementation of the recommendations of The Nation's Report Card.

The Higher Education Amendments of 1986 reauthorized a revised and expanded set of international education programs. They include graduate and undergraduate language and area centers, establishment of language resource centers, provision for intensive summer language institutes, and fellowships for advanced graduate training for exceptional students studying foreign languages. Two years ago Robert Cole, Professor of Sociology and Business at the University of Michigan and a leading scholar on Japanese economic achievement, in testimony before the House Labor Appropriations Subcommittee noted: "Common sense must tell us that foreign language and area study expertise is a requisite for dealing effectively with the increasing internationalization of the economy.... Without federal support in the past, we would be in a far worse situation than we are in today." This is still true today, and we urge the Subcommittee to reject the administration's request for zero funding of Title VI international education programs and continue to fund them.

In addition, funding for the programs of Title IX -- the Jacob Javits Fellowships, the Patricia Roberts Harris Fellowships, the Law School Clinical Experiences, and the Legal Training for the Disadvantaged -- must be maintained. All of these programs provide assistance to graduate and professional students in need not provided in any other programs. In order to continue training our best and brightest students to take on the tasks of tomorrow, the administration's request to abolish these programs must also be rejected.

Thank you for the opportunity to present our views.

Members

American Anthropological Association
American Economic Association
American Historical Association
American Political Science Association
American Psychological Association
American Sociological Association
American Statistical Association
Association of American Geographers
Association of American Law Schools
Linguistic Society of America

Affiliates

American Association for Public Opinion Research
American Educational Research Association
American Society of Criminology
Association for Asian Studies
Association for the Social Sciences in Health
Eastern Sociological Society
Economic History Association
Gerontological Society of America
History of Science Society
International Studies Association
Law and Society Association
Midwest Sociological Society
National Council on Family Relations
National Council for the Social Studies
North Central Sociological Association
Northeastern Anthropological Association
Operations Research Society of America
Population Association of America
Regional Science Association
Rural Sociological Society
Social Science History Association
Society for the History of Technology
Society for Research on Adolesence
Society for Research in Child Development
Society for the Scientific Study of Religion
Southern Sociological Society
Southwestern Social Science Association
Speech Communication Association
The Institute of Management Sciences

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University of Illinois
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Institute for Social Research, University of Michigan
University of Iowa
The Johns Hopkins University
Massachusetts Institute of Technology
Maxwell School of Citizenship and Public Affairs, Syracuse University
University of Michigan
University of Missouri
National Opinion Research Center
University of Nebraska
New York University
University of North Carolina, Chapel Hill
Ohio State University
University of Oregon
University of Pennsylvania
Pennsylvania State University
University of Pittsburgh
Princeton University
Rutgers University
Social Science Research Council
University of Southern California
Stanford University
State University of New York at Stony Brook
University of Tennessee, Knoxville
Texas A & M University
Tulane University
University of Virginia
University of Washington
University of Wisconsin, Madison
University of Wisconsin, Milwaukee
Yale University

Senator HATFIELD [presiding]. The guard has changed. I am sorry I did not have a chance to hear your testimony, but we appreciate your help.

Thank you very much, Mr. Silver, for your comments.

How do you do, Dr. Garduque? Now, let me make sure we have the rest of our witnesses. I really want to apologize. The whole system is very difficult to predict around here, and the witnesses traveled distances, and have good testimony, and I want to assure you that at least staff and the many members who have specific interest will take the time to read it.

But I am terribly sorry about the lack of time for oral testimony. Let's extend your time to 3 minutes, and you may proceed.

STATEMENT OF DR. LAURIE GARDUQUE, AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

Dr. GARDUQUE. Thank you, Mr. Chairman. I appreciate this opportunity.

We strongly urge you and members of the subcommittee to support an amendment to the administration's request for $70 million for educational research and statistics. And we urge you to consider providing OERI with an additional $4 million for new targeted research initiatives.

Increased funding is urgently needed to maintain core activities, such as the regional laboratories, and national research centers, and to improve the Office of Educational Research and improve its capacity to generate and make available new knowledge and information.

Concern about America's competitiveness is driving this year's budget, as the Senator well knows, in education and science down to benefit from increased public interest and concern.

We are asking you and members of the subcommittee to consider their intersection, education, and research, and rethinking about priorities and strategies for promoting economic growth and productivity, and improving the quality of life for all American citizens.

Over the course of the last 4 years, it has become increasingly clear that educational research can produce answers, and is ready to assume a necessary and more prominent role in the future progress of education.

The many impressive national and State reports on educational reform and improvement over the past 4 years rely extensively upon the information, knowledge, and perspective gained through research.

Those reports show that the major ideas and strategies shaping the educational reform movement. Such ideas as early childhood interventions and dropout prevention progams come from educational research, drawing strength from a solid base of research knowledge.

The reports call for far reaching changes in America's schools and classrooms. The recommendations reflect the realization that increased spending for education was not meant to simply fund more of the same, but rather, new education dollars were intended to support different policies and programs that will lead to substantial improvements in teaching and learning.

We believe research is the key in making sound investments in the most effective and efficient policies and programs.

I have four points I would like to make. AERA believes the administration's budget for educational research and statistics, in contrast to the rest of their proposals, would be basically sound.

The increase would be directed toward the areas of greatest need and retention, namely, repairing the data base and providing support for field initiated research.

The statistics program has been criticized for its lack of comprehensiveness, accuracy, and timeliness. OERI has launched several initiatives in response to those criticisms. But their efforts hinge on the availability of funds.

Without the addition of funding requested by the Department, progress in collecting improved statistical information on everything from student achievement to dropouts will grind to a halt.

The budget request provides continued support for OERI's institutional programs, including ERIC, labs, and centers. Stable and continued support is absolutely essential to this program's success.

We find the budget for research and statistics lacking in only one respect, and that is the amount of funds that are provided for field initiated research. Over the past 5 years, we have seen a decline in the amount of funds going to producing new knowledge in education, declined by over 50 percent.

PREPARED STATEMENT

We believe funds are urgently needed to ensure targeted research on specific problems that are of concern to the policymakers and educators of this country.

So we are asking for the committee's support. Thank you.

Senator HATFIELD. Thank you.

[The statement follows:]

STATEMENT OF DR. LAURIE GARDUQUE

Mr. Chairman and Members of the Subcommittee, I am Laurie Garduque, Director of Governmental and Professional Liaison for the American Educational Research Association. Thank you for this opportunity to present the Association's views on the FY 88 appropriation for the research, statistics, and improvement activities of the Department ofEducation's Office of Educational Research and Improvement (OERI).

AERA strongly urges you and Members of the Subcommittee to consider going beyond the Administration's request for a $6 million increase over last year's $64 million budget and provide OERI with an additional $4 million for new research initiatives. Increased funding is urgently needed to maintain core activities and to revitalize OERI's capacity to generate and make available new knowledge and information. Continued progress in education, as in health, agriculture, and in business depends on advancements through research and development.

Educational research has made great strides in the past dozen years. Advances in educational research include new strategies and methodologies for the study of education, the accumulation of new knowledge in key areas of study, and the ability to put research to effective use. Federal education research programs have never had the financial support of NIH or NSF. Still, the programs have successfully managed their modest resources to develop productive lines of research in several areas, including studies on the acquisition of reading, writing, and mathematics skills; testing and assessment; teaching and classroom management; school finance and improvement of governance and school effectiveness. The collection of statistical information on the condition of education has become an increasingly sophisticated process and is an integral part of OERI's mission.

This year the budget for the principle research and statistics unit for the Department of Education stands at $64 million. At the same time, we spend $7 billion in health research and development, $2.2 billion in energy, and $2.4 billion in space. For a $280 billion education system our investment in educational research and development seems embarrassingly low.

Over the course of the last two decades, it has become increasingly clear that educational research can produce answers and is ready to assume a necessary and more prominent role in the future progress of education. The many impressive national and state reports on educational reform and improvement of the past four years rely extensively upon the information, knowledge, and perspective gained through research. Notable examples include the National Governors Association's report, "Time for Results," the Carneigie Forum's "A Nation Prepared: Teachers for the 21st Century," and most recently, "The Nation's Report Card," written by a study group chaired by Lamar Alexander.

Those reports show that the major ideas and strategies shaping educational reform derive from educational research. Drawing strength from a solid base of research knowledge, the reports call for far reaching changes in America's schools and classrooms. The recommendations reflect the realization that increased spending for education was not meant to simply fund mor of the same. But rather, new education dollars were intended to support different policies and programs that would lead to substantial improvements in teaching and learning.

An illustration of research can influence reform and is not an inexhaustible resource is the knowledge gained through effective schools research. The effective schools literature has widespread currency among policymakers and educators. Research grounded on effective schools principles has increased our understanding of effective teaching practices, school climate, and instructional leadership. But with the changes instituted in the wake of reform, the value of what we know is beginning to decline. For example, knowledge about effective practices derived from studies of traditional classrooms will not be very helpful to teachers in the restructured schools promoted by various reform agendas. Research is needed to bring evidence and analysis to bear on which new ideas have the most promise and why.

The Administration's FY 88 budget request would bring to a halt the precipitous decline in the quantity and quality of information on the condition of education. According to a recent GAO report, fiscal resources for producing statistical information have fallen by over thirty percent in real terms in the last five years. During the same period, education research experienced over a fifty percent reduction in support. Mr. Chairman, the impact of the budget cuts on the agencies producing information and generating knowledge is a matter of grave concern because the federal government remains the major source of funding for such activities. With states and localities assuming an ever-increasing share of the costs of education, they have neither the resources or the capacity to support research or participate in national statistics programs.

AERA believes the Administration's budget request for educational research and statistics is basically sound. Over ninety percent of the budget would go toward the maintenance of current activities. The increase would be directed toward areas in greatest need of attention; namely, repairing the data base and and providing support for field initiated research.

The budget increase would enable the agency to make much needed improvements in statistics and information gathering activities. One example of the inadequacy of our statistics is the information on teachers. The Center's data base has been found inadequate to address questions about how school policies affect teacher decisions to enter and leave the profession, or how merit pay or master teacher plans affect the quality of teaching. The gaps in information make it practically impossible to assess the number of math and science teachers or the seriousness of the decline in minorities entering the teaching profession. OERI has planned several initiatives in response to those criticisms. But efforts hinge on the availability of funds. Without the additional funds requested, progress in collecting improved statistical information on everything from student achievement to dropouts will be jeopardized.

The major casualty of past reductions in research has been independent research by individual investigators. Last year, OERI received over 340 applications for $500 thousand in funds and could only make 10 awards. The Administration's budget request includes $1 million for new research projects. AERA asks for Committee's support for at least $4 million to support targeted research initiatives in such priority areas as at-risk children adn youth, restructuring schools and the teaching profession, and effective thinking and learning skill. Without additonal funds, OERI has an extremely limited capacity to respond to creative and innovative ideas from the field, to stimulate research in areas of critical need, or to foster interesting possibilities for interdisciplinary research.

The budget request would provide continued support for institutional programs including regional laboratories and national research centers, National Assessment of Educational Progress (NAEP), and the Educational Resources Information Center (ERIC) system. The laboratories and centers constitute the centerpiece of OERI's operation and stable and continued support is absolutely essential to their success.

There is a need now more than ever for an enhanced research and development capacity. All across the country, state and local governments have mounted major initiatives to improve the quality of education. Blue ribbon commmissions, task forces, governors, state legislators, state and local school officials, teachers, and parents are analyzing the problems confronting American education and seeking the information and knowledge gained through research. They realize that education is too important an enterprise to leave policy decisions to chance.

AERA urges you to go beyond the levels of funding sought by the Administration's budget request for OERI. American education cannot afford further erosion of the federal government's capacity to produce information on the condition of education. It is understandable that this period of fiscal duress, pressures to reduce the deficit overshadow consideration of expanding resources. AERA is not advocating increased spending for research and statistics in lieu of spending for other programs, but as a necessary complement to ensure the vitality of ongoing programs. The modest increases we seek will make a difference. The costs of leaving our statistics and information gathering activities in disarray means both information lost and policies based on something less than the most complete relevant and timely data.

Our nation's children have a right to an education based on the soundest information available and supported by the latest advances in science and technology. AERA seeks your continued support for the federal role in education research statistics and improvement activities.

Thank you again for this opportunity to share our views with you. We would be pleased to answer any questions you or members of the committee may have.

STATEMENT OF PAULINE H. BROOKS, CHILDREN'S TELEVISION WORKSHOP

Senator HATFIELD. Pauline Brooks.

Ms. BROOKS. Good afternoon. Thank you. I am happy to be here.

Children's Television Workshop produces "Sesame Street" and other television programs which I will be talking about. And I am here today to specifically urge the subcommittee to provide strong financial support for educational children's programming; specifically, to support the full authorization of $254 million for the Corporation for Public Broadcasting for fiscal 1990, and to encourage the Department of Education to commit more funds for educational television, particularly in the areas of science and math.

In January of this year, our new children's mathematics series, entitled "Square One TV," premiered on public television stations, and is helping to address the national crisis in math education by using the power and impact of television to motivate children to learn and use mathematics.

"Square One TV" was a result of a unique funding partnership between Government, CPB, foundations, and private enterprises.

We are now requesting funding for a second season, in order to build on the impetus the series has achieved. And we believe that CPB will respond favorably.

However, we understand that so far the Department of Education has given no indication that it is willing to support continuation of the series. And if adequate support is not forthcoming from Federal agencies, our ability to hold together the broad funding consortium will be threatened, as indeed, will continued reproduction of the series.

Our science series for children, "3–2–1 Contact," continues to bring the wonders of science to millions of children. The National Science Foundation, Department of Education, and CPB all plan to provide funding for 2 more years.

The PBS children's block is the only sustained educational television programming available for children, and it is a vital element of public television service to the public; one which has proved its value, and deserves continued support.

Educational television for children is cost effective, and it works. But it can work only if leadership from the Congress insists that resources are provided.

We support full funding for CPB, and direct the Department of Education to provide more resources to harness television into the service of educating our children.

PREPARED STATEMENT

Thank you. And I would like to provide this booklet on our program for the record.

[The statement follows:]

STATEMENT OF PAULINE H. BROOKS

Thank you for the opportunity to appear before you today. I am here to urge this Subcommittee to provide strong financial support for educational television programming for this nation's children.

Specifically, I want to ask you and your Subcommittee to:

-- support the full authorized level of funds for the Corporation for Public Broadcasting for FY 1990;

-- encourage the Department of Education to commit more funds for educational television, particularly in the areas of science and math.

Children's Television Workshop has a direct interest in these appropriations since Community Service Grants from CPB will be used in part by public television stations to help support SESAME STREET. Also, funding has been provided by both CPB and the Department of Education for our two educational television series for 8-12 year-olds, 3-2-1 CONTACT and SQUARE ONE TV, about science and mathematics respectively.

The first season of our new mathematics series -- SQUARE ONE TV -- premiered on public TV stations on January 26th and is helping to address the national crisis in math education by using the power and impact of television to promote enthusiasm for and interest in mathematics; to encourage the use and application of problem-solving strategies in mathematics; and to present sound mathematical content in an interesting and meaningful way.

Season I consists of 75 half-hour programs which have been received extremely well by educators, parents and the press. Most importantly, these programs are at work every day to add new opportunities to learn about mathematics to millions of children around the country.

"The right equation for upgrading math skills" says the Los Angeles Times. Nine year-old Amy writes "One day I watched SQUARE ONE and the next day I had a decimal problem and with your help I got it correct. Thanks alot!"

Season I of SQUARE ONE TV was the result of a unique funding partnership among government, CPB, foundations and private enterprise. CPB and DOE contributed $3 million each. DOE contributions were made available through NSF, the Government's lead funder.

We are now requesting funding for a second season of SQUARE ONE TV, in order to build on the success and excitment the series has achieved to date. We are hopeful that CPB will favorably respond to our request.

However, we understand that so far DOE has given no indication that it is willing to support continuation of the series. If adequate support is not forthcoming from Federal agencies, our ability to hold together the broad funding consortium will be threatened, as will continued new production for the series.

What is at stake is the educational value that DOE dollars can contribute, as well as the value of additional dollars they will leverage outside the Federal budget. We urge you to urge DOE to sustain its previous commitment to help address the crisis in mathematics education in this country.

Our series on science education for children aged 8-12, 3-2-1 CONTACT, continues to bring a world of science to millions of children at home, enlarging the time they spend on learning. NSF has committed $1.75 million for each of the next two seasons of the series. We understand that DOE has also committed $1.25 million for each of the next two seasons, less than the $1.5 million per year originally contemplated, but more than the $1.0 million per year they have actually provided in previous years. We urge you to reinforce DOE's vital contribution to support of this series.

CPB has provided more than $1 million per year to 3-2-1 CONTACT, and plans to continue to do so for at least two additional seasons.

SQUARE ONE TV, the new math series, is the first significant addition of new programming to the PBS children's block since 3-2-1 CONTACT started in 1980. This children's block is the only sustained educational television programming available for children, and is a vital element of public television's service to the public -- one which has proved its value, and deserves continued support.

At a time when commercial television provides no daily childrens programming, the importance of public television's educational programming is even greater. We urge the Subcommittee to provide adequate resources for CPB and public stations to continue this vital service.

We live in a society where the need to understand and use mathematics and science is growing every day. Technology is the central building block of modern industrial and scientific innovation. A technology based economy offers rewards and opportunity to those who are able to master its complexities -- and sharply limited opportunity to those who do not.

Whether or not we provide children with an adequate foundation in math and science will affect their lives as individual citizens as well as our nation's ability to compete in the international marketplace. When children are grown and looking for jobs, many are likely to qualify only for lower level positions unless they have mastered a certain level of mathematics and science. And the pattern we're seeing now all too frequently is one where children in general, and females and minorities in particular, come into the school system liking science and mathematics, but then leaving the school system disliking and ignorant of those subjects.

SQUARE ONE TV and 3-2-1 CONTACT represent a national effort to help turn around our national failure in educating our young people in science and mathematics. Our programs can supplement and complement classroom instruction, and serve as a catalyst for families, schools and community groups to take action to help our children learn this basic subject matter.

Quality educational television offers a practical, cost-effective way to attract children to a new opportunity to learn at home, as well as to supplement and reinforce classroom teaching. Our experience also shows that educational television is a bargain -- about a penny per program for each viewer.

The Congress's support of our programs has made the Children's Television Workshop a major instructional educational institution with probably the largest student body in the world -- millions of children two to thirteen years old. These children mostly attend our classes voluntarily and before or after mandatory hours spent in the classroom.

Your support of our programs is adding hours to each school day, and each school year -- effectively supplementing the work of teachers and parents. Television reaches every consumer of our society, and children watch it daily -- too much, in fact. Without our programs, and others in PBS's children's block, what they will watch will be mindless entertainment at best. With your continued forceful support, this powerful medium will be used for constructive educational purposes that benefit all our children -- and ultimately the strength of our free society.

Experience has shown that educational television for children works -- and that it can only work if leadership from the Congress insists that resources be made available to allow it to do so.

Please support full funding for CPB, and please direct the Department of Education to provide more resources to harness television in service of education

Thank you.

Senator HATFIELD. Where are you from originally?

Ms. BROOKS. I'm from England, originally, but I am a United States citizen.

Senator HATFIELD. Where have you lived since you have been in the United States?

Ms. BROOKS. Right in the middle of Manhattan.

Senator HATFIELD. You also have a little flavor of the southern English.

Ms. BROOKS. Well, I was originally born in Darbyshire, which is in the middle of the country. And then I lived in London for awhile before coming over here. And now my family lives on the south coast. And I have been here 20 years.

Senator HATFIELD. We pride ourselves in the Pacific Northwest, according to most studies, of having the least regional or local accents of any part of the United States. And as a consequence, I became interested in speech characteristics.

I caught the English, but there were also traces of southern United States. Well, we will discuss speech some other time when we are not under time constraints.

Thank you very much.

Mr. Peter Fannon, National Association of Public Television States.

STATEMENT OF PETER M. FANNON, NATIONAL ASSOCIATION OF PUBLIC TELEVISION STATIONS

Mr. FANNON. Thank you. I am Peter Fannon of the National Association of Public Television Stations. I appreciate the opportunity to appear, and like my colleague, Ms. Brooks, from the Children's Television Workshop, who has already eloquently discussed the children's television aspects of public broadcasting, we appear on behalf of the funding for the Corporation for Public Broadcasting.

I would like to encourage the committee to oppose the administration's recommendations to cut existing fiscal year 1988–89 funds for CPB by means of a reappropriation, which is really nothing more than a back door rescission, and to encourage the committee to support the full authorized sum for CPB for fiscal year 1990 of $254 million.

Over 90 percent of these funds for the Corporation go directly into programming, either through the stations and their grants that go from CPB to the stations based on local funds raised or through activity by the Corporation itself.

In addition, a small sum is allocated to continuing operations of the nationwide interconnection which distributes these programs around the country; to the cost of copyright; and even to the first steps in rebuilding the satellite system necessary for public broadcasting's long-range development.

If the administration's proposals were adopted, Mr. Chairman, it would mean halving, cutting in half, the support that goes to public television stations.

In the case of Oregon, this would mean Oregon network and Medford, OR, which is independent, as you know, would go from approximately $1.2 million to about one-half that level in 1990.

Were it not for the thoughtfulness of the Congress, Mr. Chairman, public broadcasting would not be able to provide the kinds of programs that we do day in and day out over the last 5 years; it is this committee and the Congress' leadership which have ensured that we have been able to recoup from the cuts that were enacted in 1981.

And we have begun now to refuel the program pipeline which had, in fact, run quite dry based on the loss of Federal support, which leverages so much of our private support.

Our goals, now, however, are for public broadcasting to do more, to mean more, and contribute more to our society by using the power of television.

And in that vein, we have committed the 1988 and 1989 funds already appropriated; have specific plans for 1990 funds for new programs, programs of the sort dealing with the Constitution coming up this year with Bill Moyers; 2 years hence, a program on the mind, a followup series to the brain series, which appeared 2 years ago. And a series on American history, and actions within it, in the context of American history and the world, called "The American Experience," which will premier about 3 years from now, based on funds already in the pipeline. And similar programs.

Our efforts are to make public television as important as it can be, and in light of what is happening in commercial television, both broadcast and people, we believe the only way for us to pick up the responcsibilities that are being asked of us and to deal effectively with the challenges that are facing communications in this country, that we need continued Federal support of this size.

When the Corporation for Public Broadcasting itself appeared, they testifed that the $254 million is the full authorized amount. The current services amount for 1990 would be $307 million.

And actually the plans that we have in place, against which we're raising private funds, would require, if we were fully funded, something closer to $474 million.

We appreciate the chance to make these points with you, Mr. Chairman, and look for your continued help in fulfilling our responsibility in making public television an even more important element of our everyday society.

PREPARED STATEMENT

Senator HATFIELD. Thank you very much. We appreciate your summarization. Your full statement will be placed in the record.

Mr. FANNON. Thank you, Mr. Chairman.

[The statement follows:]

Statement of Peter M. Fannon

The National Association of Public Television Stations (NAPTS) is pleased to provide this testimony for federal funding through FY1990 for the Corporation for Public Broadcasting (CPB). We are deeply grateful to the Congress and to this Subcommittee for its outstanding support you have given to help fulfill public television's mission to educate, enrich, and inform all Americans. Now, as the public demand for public television is increasing, and as the importance of non-commercial television is growing, we ask the Committee's conginued help for new programs and outreach services in the years ahead.

Summary of Recommendation

We urge this Subcommittee to approve $254 million for CPB for FY1990 and to reject the Administration's proposed "reappropriation" of funds already enacted and committed for FY1988 and 1989. Your support for these funds will help us continue to refill the programming pipeline run nearly dry by the Administration's budget cuts of a few years ago; it will help public broadcasting update and refurbish the satellite interconnection which distributes public programs to stations, schools and individuals around the country and it will help us develop the new education, training and self-help programs which are fast becoming the daily staples of students and citizens everywhere.

For FY1990, we ask that the Subcommittee recommend an appropriation of $254 million, the full amount authorized just a year ago at this time (Public Law 99-272).

CPB analysis shows that merely to finance the level of service provided by public broadcasting in FY1982 would require $307.1 million. This was the benchmark year of programming and outreach service provided by public broadcasting before the severe budget cuts of 1981 (-25%). Now, however, for the period eight years later, public broadcasting's "real" need--for this "current service" plus limited new programming and other costs--is well over $400 million.

While public broadcasting would appreciate and use wisely this level of federal support, we are well aware of the tremendous pressure on the federal budget at this time. In this context, we ask that you consider appropriating the full authorized amount of $254 million.

We also ask you to reject the Administration's proposed "reappropriation" of CPB funds from FY1988 and FY1989, which it would use to finance its FY1990 request of $132 million. This proposal is not merely an old request in new clothing; it is a "backdoor rescission" for FY1988 and 1989 intended to subvert the Congress's earlier approval of reasonable funding levels for CPB. It would, of course, gut the forward funding process that Congress wisely approved to enable non-commercial broadcasting to rely on enough predictable support in order to make the long-term commitments necessary for talent, program development and production--a process which often takes years to bring excellent educational programs to the screen.

Public broadcasting has used these advance appropriations already enacted for FY1988 and 1989 for programs and new projects; examples follow in this testimony. Let us thank this Committee again on behalf of the 321 educational stations licensed to over 180 community organizations, school boards, colleges, universities, and local and state governments, for appreciates both your support and your recognition that the forward funding must be preserved. Advance appropriations are the lynchpin of private, state and other funds and the only way public broadcasting can pursue innovative ways to produce and distribute more high quality programming in efficient and cost-effective ways.

Public television: Programs in production, challenges for the future

Maintaining these reasonable levels of federal support into the future remains crucial to new programs, the success of other fundraising, and to the nation's taking full advantage of public broadcasting. We would like to share with you a few things we have been able to accomplish with the support you have provided and what we plan for future years with your help.

Over the past several years, with the assistance of the Congress in funding public television has begun to rebuild the programming momentum lost because of the budget cuts effective some four years ago. New, domestically-produced series of unmatched caliber have been aired, continuing programs have been improved and renewed, and services--such as outreach--provided by stations in individual communities are increasing in value.

Consequently, public television has continued to attract more viewers, to expand its overall service, and earn higher levels of financial support from private and local sources. This progress is the result of years of rebuilding effort nationwide, and now new plans and programs based on stable levels of federal support. The demand for public television programming is rising. For example, in January of this year, public television attracted its largest weekly audience ever: 103.3 million Americans each using nearly four hours of programs. While public TV audiences expand, the networks' decline, and commercial cable holds steady.

This demand is not surprising; and certainly public television can and should be more valuable in the future. The non-commercial alternative is becoming more satisfying. Indeed, in light of all that is going on in commercial television, one must ask how public broadcasting can fulfill growing expectations of it. As commercial television is driven more by the bottom line, the public television industry is constantly reminded of the needs the American people have for its programs and services.

To meet the challenge and to make maximum use of the advance appropriations for CPB, individual stations around the country undertook a tremendous cooperative effort with CPB to create a special Program Challenge Fund. This Fund pools the financial resources of the stations with matching sums from CPB--$24 million over a three year period. The Fund is intended to ensure at least two new, major programs, especially series, per year are available, in addition to all other programming efforts.

In fact, the Challenge Fund has already committed to the production of two new series and a major special program with Bill Moyers. One series is on the impact of religion on politics, the other is on the works of noted mythologist Joseph Campbell; the major special program explores the issues and operation of our Constitution in this bicentennial year.

The Challenge Fund, however, is but one way in which public television has taken full advantage of forward funding. For example, stations committed funds last year to a new series, The Mind, which will not air for two more years. Three other major programs are now on track which woudl not otherwise have been possible: (1) the four part project Secret Intelligence from KCET/Los Angeles; (2) the sixteen part American Experience documentary series on the life of your nation, headed by WGBH/Boston; and (3) a second set of installments to Henry Hampton's moving and comprehensive look at the American civil rights movement Eyes on the Prize.

In addition, the public television stations in planning for future programs for their communitiess, have just committed in the most recent Station Program Cooperative, to a record $43.8 million purchase of 23 returning series and two new ones for the 1987-88 period. And some of these programs will provide the basis for future projects.

One very important project for all of public broadcasting lies ahead which is not a program per se. That is the rebuilding of the program distribution system for public TV and radio--the satellite interconnection. PBS, NPR and CPB are already designing the necessary charges for this technical nationwide system for the 1990's. As in the past, all will pool their recources to rebuild an adequate system for the educational programs and sereis which public broadcasting provides. Part of the FY1990 funds we seek will help develop and finance this necessary new system.

CPB program support remains vital

Support for existing programs from the CPB TV Program Fund is also vital to maintaining our support from viewers and other funders. On the public affairs front, MacNeil-Lehrer Newshour continues to set the national standard for in-depth coverage of fast-breaking news. With the addition of the talents of Roger Mudd and Bill Moyers and the opening of a Capitol Hill bureau staffed by Dirksen-award winning Capitol correspondent Cokie Roberts, the excellence of this series produced by WNET/New York and WETA/Washington can only be augmented.

Frontline, the weekly news documentary series produced by WGBH/Boston, regularly attracts acclaim for its examination of controversial social and political issues. Tackling such diverse topics as the new adoption reality, drug abuse, AIDS, earthquakes, and astronauts, Frontline continues to set the pace for public affairs documentaries.

Whether it involves providing programming for pre-schoolers at home, special reading programs for the summer, or instructional television in the classroom, public television is continuing and expanding its unique learning signal to our nation's children.

On the heels of the success of Sesame Street, The Electric Company, and 3-2-1 Contact, the Children's Television Workshop this year premiered its new mathematics series Square One TV for 8-12 year olds. Through the support of CPB and other funders, including the U.S. Department of Education and the National Science Foundation, Square One TV attempts to educate through entertaining and to prevent the development of "math fear" in our young people. The importance to our country's future competitiveness of developing better math and science education for our young people cannot be overstated, and these programs, developed with teachers, researchers, and children, are a strong step forward in meeting that goal.

Reading Rainbow, the summertime weekly reading series for children hosted by LeVar Burton of Roots fame and produced by WNED/Buffalo and the Nebraska Educational Television Network, has prompted measurable interest in summer reading by children nationwide. New funding in the last two years from the National Science Foundation has allowed the series to produce eight new sceince reading episodes.

The trendsetting family drama series Wonderworks this year won the Emmy for children's programming for its presentation of "Anne of Green Gables." A sequel to the first four episodes of the L.H. Montgomery classic is in the works, as are Time of the Otter, a sequel to the acclaimed Seal Morning, and other throught-provoking and exquisitely produced programs that allow families to watch television together; where both parents and children can learn and enjoy.

Continued support from CPB to two of public television's premiere performance series also remains crucial to fulfilling their mission of celebrating the very best of this nation's cultural achievements. American Playhouse this season is presenting such prime performances as "Eleanor", a one-woman show on Eleanor Roosevelt starring Lee Remick, and adaptations of the classic novels "Go Tell it on the Mountain" by James Baldwin, "Native Son" by Richard Wright, and "the Awakening" by Kate Chopin. Great Performances, Live from Lincoln Center, and Live from the Met are also planning to bring new seasons of classics and brilliant new works in theater, music, opera, and dance to audiences who otherwise would never have the opportunity to experience them.

The recent cutbacks of private corporate underwriting of Great Performances demonstrated how important CPB program funds are in maintaining even the most popular of PTV fare.

Local public television service -- a valued community resource

While federal support is vital to the production and purchase of national programming for local public television stations, local program production is equally important and also benefits directly from federal funding. Local news, public affairs, candidate debates, state house coverage, and educational and outreach programs are the special activities in which public television excels. Most of our stations are in the process of rebuilding or conservatively expanding their local services; much had to be sacrificed when the federal cuts of 1981 became reality. If funding is cut, local production is usually the first casualty.

The importance of this vital public television mission cannot be understated in an era where commercial broadcasting stations are owned by out-of-town interests and where this trend is accelerating. These days it is often the case that the only locally controlled and programmed television stations are public television stations.

Cooperative efforts between public television stations and their communities can be powerful vehicles for human resource and social services on national and local levels. Couple these resources with a nationally organized outreach effort, and you arrive at the highly successful Project Literacy U.S. (PLUS) program conducted last year to help fight adult illiteracy. The success of this project in raising public awareness of the literacy issue, attracting both those who requested tutoring and potential volunteers, and sparking government action at all levels surpassed all expectations.

Plans are now being made to continue the outreach program on adult illiteracy by focusing on the effects and cures for illiteracy at the workplace. With the help of business, government, and foundation support, public television stations and ABC network outlets will be able to continue their fine work in attacking illiteracy head-on.

The Public Television Outreach Alliance -- stations WQED/Pittsbrugh, KCTS/Seattle, WETA/Washington, the Nebraska Educational Network, and the Kentucky Educational Tleevision Network -- has spearheaded these national outreach projects. The first public television outreach effort "The Chemical People", focusing on the effects of drug abuse on our nation's teenagers, was followed this spring by "A Generation At Risk". The centerpiece of this outreach program was a documentary hosted by First Lady Nancy Reagan on the ancillary problems of teenage drug abuse, including adolescent pregnancy, school dropouts, and job training.

Individual stations have also had success in facing the pressing social problems of their viewing areas. One station that has had enormous success on a variety of issues in WTVS/Detroit. In response to starlting increases in joblessness, WTVS initiated the Communication/Information System for the Unemployed (CISU) and the Working Channel not only to provide "job bank" information and job matching, but also to root out the problem of the long-term unemployed in the Detroit area.

On the education front, public television continues to serve learners of all ages through classroom and home offerings. The Kentucky Educational Television Network, creators of the special televised Graduate Equivalency Diploma (GED) programs, is now making these programs available to adult learners nationwide. WNET/New York has developed amazing technology marrying computers with television to provide its special "Learning Link" services to hundreds of teachers in the New York/New Jersey/Connecticut area.

Growing number of adult learners have taken advantage of the wide range of college courses for credit offered by public television stations and accredited by local universities and community colleges. The "non-traditional" learners--older students, parents, or those with full-time jobs--are particularly well-served by these courses which offer rigorous and challenging curricula that can be viewed at home.

Conclusion

The financial, technological, and creative needs of public television will remain great into the 1990's. Federal funding remains the key component of public broadcasting's income. Sufficient levels of federal support will guarantee the development of new programs, the further development of public broadcasting, and more effective use of television and radio for our nation.

The nation's public television stations are now poised to face their future--to strengthen local and national producers to encourage new initiatives in programming in keeping with its role as innovator, and to serve local communities through education and as social resource centers.

Any cutbacks in federal funds will certainly affect public television's ability to meet these goals. We thank this Subcommittee for its leadership in providng the growth in federal funding over the last several years, and we urge you to consider supporting an appropriation of $254 million for FY1990.

STATEMENT OF PAUL RETTIG, VICE PRESIDENT, HEALTH INDUSTRY MANUFACTURERS ASSOCIATION

Senator HATFIELD. Mr. Paul Rettig of the Health Industry Manufacturers Association.

Mr. RETTIG. I am Paul Rettig, vice president of the Health Industry Manufacturers Association, known as HIMA.

HIMA represents some 300 manufacturers of medical devices, diagnostic products, and health care information systems.

We have a vital stake, we believe, in the successful working of Medicare's Prospective Payment System, and, therefore, are pleased to be able to testify on behalf of the Prospective Payment Assessment Commission, which as you know, is an independent commission under the Medicare law, to advise the Department of Health and Human Services and the Congress.

We support the appropriation request of the Prospective Payment Assessment Commission known as ProPAC. They have asked for $3,798,000. This is a 10-percent increase, two-thirds of which is devoted to—is earmarked essentially for research.

And we believe that research activity is invaluable in informing the committee's decisions on issues in the prospective payment systems.

I want to emphasize, if I can, that we believe the Commission is an important actor in regard to Medicare prospective payment policy. It is free from OMB influence. It technically is, I think, a body that is appointed by OTA, and its budget is technically part of the legislative appropriations.

We believe their independent knowledge and advice is useful for both Congress and the administration. As I stated, we support their request for research. They are planning $1.25 million for extramural research.

And finally, we believe that public participation in ProPAC's deliberations is useful and valuable. The Commission has revised its procedures to facilitate that. We think a little more can be done if they will make available some of the analyses that the commissioners themselves used in making decisions that will facilitate more informed public participation.

We think organizations and individuals that have an interest should also make more of an effort than they have.

In summary, Mr. Chairman, we support the budget request. Thank you very much.

PREPARED STATEMENT

Senator HATFIELD. Thank you very much, Mr. Rettig. We appreciate your being here today.

[The statement follows:]

STATEMENT OF PAUL RETTIG

Mr. Chairman, I am Paul Rettig, Vice President for Health Care Policy at the Health Industry Manufacturers Association (HIMA). The Association represents some 300 device, diagnostic, and health information system manufacturers. HIMA members produce more than 90% of the medical products sold in the United States. As leaders in advancing the state of the art in medical technology, our members have a stake in the workings of Medicare's Prospective Payment System (PPS). We supported the PPS legislation and the specific requirement that an independent commission be established.

The Association has consistently supported ProPAC's modest appropriation request, and we do so again this year. Although ProPAC's request of $3,798,000 is almost 10 percent higher than the current budget level, two-thirds of the increase would support increased research and data development activities. HIMA supports this higher level of funding because it is critical to ProPAC's objective of basing decisions on reliable, timely data and information.

Medicare's Prospective Payment System was an important and necessary change in Medicare hospital payment policy -- but one that gave unprecedented power to the Secretary of Health and Human Services. In times of growing budget deficits, the annual update factor has become a politically charged budgetary tool. ProPAC has played a critical role in evaluating the effects of PPS on hospitals and beneficiaries and making reasonable recommendations. ProPAC operates from a fundamental assumption that the payment system should be flexible and respond to change, a position with which the Administration is unsympathetic. On this point, we side with the Commission.

But HIMA has not always agreed with ProPAC. We have challenged the Commission on both substantive and procedural points. In its first report on ProPAC, the Congressional Office of Technology Assessment (OTA) recommended that "ProPAC should try to build enough time into its decision processes in order to allow public comment on decisions before they become final". In the summer of 1985, HIMA submitted a 25-page report entitled "Suggestions Respecting Procedures of the Prospective Payment Assessment Commission". The report proposed a set of procedural guidelines to improve the public participation in the Commission's deliberations. The Commission started its second year with a new policy of receiving comments from the public before making a final decision. This has improved the value of the Commission's public deliberations. On substantive points, we challenged decisions on capital payment, new DRGs for pacemakers, penile prostheses, and a payment add-on for MRI. In some cases, the Commission came to see the wisdom of our words; other times we came to appreciate ProPAC's thinking.

ProPAC's first three years have been marked by rapid maturation. Dr. Altman should be commended for his firm and thoughtful leadership and Dr. Young for his excellent management. As the Commission begins its fourth year, it should keep several things in mind.

1. Although the Administration has been slow to accept many important ProPAC recommendations, Congress has been giving the Commission a fair hearing. There is no doubt that ProPAC's analysis was important when Congress overrode the Secretary's update factor for the last two years or when it established an adjustment for disproportionate share hospitals. The Commission should continue to press for necessary reforms and can become the "brain trust" that will provide information and guidance for hospital payment reform over the long term.

2. Individual Commissioners will continue to bring their constituents' perspectives to the discussion of important policy questions. But the Commission will be most persuasive if it engages in open collegial discussions and decision-making, rather than simply providing a forum for expressing constituency positions or enhancing personal visibility.

3. The Commission's spending for research and data development activities has grown over the last two years as the Commission has defined its research priorities. Last year, one of the Commission's public session was reserved for a discussion by widely respected researchers on the research needs posed by the new payment system. This was a fine idea. The Commission's investment in research has payed dividends by informing the Commissioners on important issues such as outlier policies, case-mix complexity, technology advancement, and productivity changes. HIMA supports the $1.25 million request for extramural research. ProPAC has developed a research plan in several important areas related to their mandate. HIMA supports the general framework of ProPAC's research plan and suggests that the Commission focus most of its contract work in five areas:

- transitional or sub-acute care -- reports of sicker and quicker discharges and research on the need for new levels of care are all relevant topics for the Commission to consider as it evaluates the adequacy of DRG payments and possible reforms such as bundling sub-acute care into the DRG payment.

- measures of case complexity -- variations in the severity of cases within DRGs and between hospitals continues to be a vexing problem which will require additional analysis.

- relationship between resource use and cost and length of stay -- is particularly important as the Commission considers the outlier policy and possible reforms. We encourage the Commission to consider specifically whether the outlier policy could be an effective solution to the problem of new, expensive technologies which increase DRG costs but have demonstrated value over the longer term.

- capital intensity across DRGs -- ProPAC has made very thoughtful contributions to the capital payment debate. In its research for next year, the Commission should consider the extent to which there is variation among DRGs in the ratio of major moveable equipment to total capital costs.

- the effects of PPS on access to medical technology that enhances quality of care -- the Administration continues to be inflexible in adjusting PPS to account for new technologies. This is certain to affect beneficiary access to medical technology that enhances quality of care.

4. The Commission has been able to accomplish its Congressional mandate by choosing topics of public concern carefully, and by focusing its analysis and decision-making. By striking the right balance, the Commission has been able to address important policy questions such as capital payment, adjustments for disproportionate share hospitals, outlier payments, severity of illness adjustments, and beneficiary issues.

But the Commission alone is not responsible for its successes or failures. The Congress and the general public need to accept their responsibilities.

In its second report on ProPAC, the Congressional Office of Technology Assessment (OTA) suggested that the Congress clarify its mandate if it was found to be too broad. The authorizing statute indicates that the Commission should limit its scope to advising the Secretary with respect to the need for adjustments in classifications, weighting factors, and an annual update factor. However, the House Committee on Appropriations believes that the primary role of the Commission lies in a broader evaluation of the impact of the Prospective Payment System on the American health care system.

Thus far, the Commission has done a good job in meeting what might be viewed as conflicting Congressional mandates.

As to the role of OTA itself, it must assure the appointment of strong Commissioners who are willing to spend the time needed to appreciate technical analysis and its implications and who understand the strategic and broader policy issues that come before the Commission. I am confident that the Commissioners recently nominated are ready to meet this challenge.

The public also has a role in improving the quality of the deliberations, but, unfortunately, this role has not been adequately played. Groups have failed to use fully the formal process. Organizations with legitimate interest in ProPAC's deliberations attend and monitor the public hearings but seldom engage in meaningful public discussion.

Better public access to some of the briefing materials and analyses being discussed by the Commission might facilitate public participation. I would recommend that the Commission adopt a rule that the analysis used in coming to a tentative decision be available to the public upon request. This would allow the public to participate intelligently in the meeting in which a final decision would be made.

But improved public discussion cannot be achieved by formal rules alone. Interested parties must be willing to engage -- as the Commissioners and staff do at every meeting -- in substantive, public exchange of views. So far, the record of interested groups is poor, and there is much room for improvement.

To sum up:

1. The Commission has become an important player in framing Medicare hospital payment policy.

2. The deliberative process has been improved by increasing the public's opportunity to comment before a final decision is made.

3. Public participation could be improved further if constituent groups would contribute substantively, not just rhetorically, to the deliberations. This could be facilitated if the analyses which support the Commission's tentative decisions were made available before a final decision is made.

4. The research and data development activities have paid a good return on the investment.

In conclusion, we continue to support the role and contribution of the Commission and its request to this Committee for FY 1988 appropriations.

STATEMENT OF ROBERT J. CONLAN, NATIONAL PEACE INSTITUTE FOUNDATION

Senator HATFIELD. All right, Mr. Conlan, I guess you are the anchorman.

Mr. CONLAN. I will follow the dictum of the last, and I shall be brief.

I especially know I don't have to tell you about the U.S. Institute for Peace, Senator. Without you, I don't think there would be a U.S. Institute for Peace.

Senator HATFIELD. Well, thank you. Senator Matsunaga, Senator Randolph, and a number of us were very committed to this, and I want to make special note for the record that we're part of a birthing process here, and we appreciate what you have done to bring about the reality of the institute.

Mr. CONLAN. Well, Senator, thank you very much.

I have just spent 2½ of the most interesting years of my life since that legislation passed the Congress. Here's a list of the Members of the Senate who currently sit there, who are cosponsors of the legislation.

And as you know, 2½ years ago, when the legislation passed, there was a period of almost 2 years before the Institute actually came into existence. And during that time, I was visited by people all over the world who were so excited that the United States was opening a peace institute.

Since it actually has opened this year, we have been thrilled at that episode. But some of the members of the religious community who visited with you this morning, organizations who had supported the Peace Institute who now feel that they wanted to testify today, for instance, to oppose funding for it because they were concerned about it.

So I think that my remarks, which are in support of full funding for the Peace Institute, I would like to have entered into the record.

But I would also say more than the money from the Congress, I think what the Peace Institute really needs now is Congress' attention. It is in the very early part of its existence. Proper early oversight, proper guidance from the Congress, because the Peace Institute and the structure really is a creature of the Congress and not the executive branch.

And the time is now. I think it is an institution which everyone in this country will be proud of, and should be proud of today.

PREPARED STATEMENT

But I think it is time this year for Congress to make sure that it is proceeding along the path that Congress intended.

And I think that is all I have to say.

[The statement follows:]

Statement of Robert J. Conlan

Mr. Chairman, Members of the Committee, my name is Robert J. Conlan, and I am the Executive Director of the National Peace Institute Foundation. The Foundation is not officially affiliated with the United States Institute of Peace. We are an independent organization with more than 15,000 members who financially support our activities, and a group of over 50,000 interested citizens who have worked along with Congress to create the Peace Institute over the past eleven years.

I am here this afternoon to urge the Committee to appropriate the full $10 million requested by the United States Institute of Peace. The Veterans of Foreign Wars monument that stands here on Capitol Hill bears the inscription: "Since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed."

In a time when we face global nuclear annihilation, the creation of the Peace Institute by our country is quite a remarkable, and I believe, historic admission from a nation that has been a leader in promoting world peace for most of this century.

As we know, following World War I, the League of Nations was an American initiative that floundered. The Kellogg Briand Pact that "outlawed" war was followed by World War II. And, many Americans thought that the United Nations, founded forty years ago was a path to peace which would use the United States itself as a model for an emerging world government. Yet, since the founding of the United Nations, the casualties from wars exceed fifty million dead, wounded and missing, and the cost of war in the last forty years exceeds the cost of both World Wars combined.

Every time we've thought we had the answer to ending war and international violence and pressed our views on the rest of the world, we've been proven wrong by history.

That's why the creation of the Peace Institute is such a remarkable and historic admission by the United States. Because, the legislative history and Charter of the United States Institute of Peace is a frank statement that we don't know the answer to ending wars and creating a stable peace.

- o We don't know why military deterrence sometimes works, but fails on other occasions.
- o We don't really know why collective security works sometimes and sometimes doesn't.
- o And, we really don't know why nations are willing to submit to international courts at some times and not others.

But, the creation of the United States Institute of Peace says we mean to find out.

The Peace Institute is an unusual American initiative for world peace, since the push came from citizens at the grassroots and the leadership came from Congress, not the Executive Branch. The Congress deliberated this issue for ten years before creating this academic, scientifically oriented independent research institution to lead the way. An institution based on the new interdisciplinary social science of conflict resolution - a term used ten times in the Institute's Charter. An institution independent of the day to day politics of the Executive Branch, but part of our government. And, importantly, an institution that leads where the private sector cannot.

This year, when the Executive Branch recommended cutting its budget by twenty five percent, the infant United States Institute of Peace took an important first step in creating the independent institution we seek by asking for a reasonable appropriation directly from this Committee.

By using the independence Congress built into its Charter to come directly to this Committee to ask for the five cents per year per citizen it needs, the Peace Institute began actually building the independence Congress intended. An independence that not only allows the Peace Institute to ask for funding, but will allow Congress and the public to directly receive the fruits of the Institute's research unvarnished by political considerations in the future.

The Peace Institute Board took a chance. Because, as you know, OMB and the Executive Branch still refuse to concede the Peace Institute its clearly defined independence. Therefore, I urge this Committee not to break faith with Congress' commitment to independent study and research on international conflict by the United States. The National Peace Institute Foundation urges this Committee to continue the task of constructing the defenses of peace in the minds of men, and grant this important request for $10 million.

Thank you for inviting the Foundation to testify today.

THE NATIONAL PEACE INSTITUTE FOUNDATION

The National Peace Institute Foundation is a not-for-profit membership organization concerned with public education on the use of scientific peacemaking and conflict resolution theory and techniques in international and domestic conflict.

The Foundation was founded in 1982 as the educational affiliate of the National Peace Academy Campaign, a 45,000 member public service organization which led the citizen effort for creating the United States Institute of Peace. Benefits include the Foundation's periodical, the Peace Institute Reporter, which reports on the United States Institute of Peace as well as other national and domestic peace institutes.

The Foundation manages an international computer conference for scholars, practitioners and interested citizens. It is currently developing a multi-media educational program on conflict resolution from the interpersonal to the international level for secondary school students. The Foundation and its members consult with Congress and other government bodies on the United States Institute of Peace and peace education and conflict resolution programs.

Membership in the Foundation includes the option of participating in Regional Councils. The Councils run workshops and seminars teaching practical negotiating techniques. In addition, the councils sponsor educational forums about the development of national peace institutes and conduct public education activities to promote conflict resolution education and training.

All funding for the National Peace Institute Foundation comes from members, tuition fees, private grants and contributions. The Foundation is an independent organization and is not affiliated with, nor accepts any funds from the United States Institute of Peace.

BIOGRAPHY

ROBERT J. CONLAN

Robert J. Conlan was born in New York City and graduated from Fordham University in 1968 after earning a B.A. in Social Science, concentrating on Economics and Philosophy.

He began his career as a copy editor for the Wall Street Journal, and completed a journeyman's apprenticeship in the public sector from 1969 to 1971 as an advisor to Congressmen Thomas Downey and Richard Ottinger, President Kennedy's Domestic Affairs Advisor Theodore Sorensen, Governor Hugh Carey, and Mayor Charles Evers on projects from voter registration to Senate campaigns.

Mr. Conlan was Assistant to New York Mayor John Lindsay from 1971 to 1973. He worked on resolving neighborhood disputes, instituting public health programs, and served as a lobbyist on the state and federal level.

He became Chief of Staff for Congressman Frederick W. Richmond in 1974, and developed the legislative strategy and goals which led to major revisions in the Federal Food Stamp Program.

In 1975, he returned to the private sector to become Vice President for Marketing for the New York Network, a 30 station radio news network. He took part in all aspects of establishing the network, including raising venture capital, negotiating affiliate contracts, planning and marketing.

In 1977, he returned to the public sector as Executive Director for the Cooperative Bank Action National Committee. The Committee built a national coalition in favor of the National Cooperative Bank, a unique financial institution created and capitalized by Congress with $250 million to develop health, food, day care and employee owned cooperatives.

From 1979 to 1983, he served as the Congressional Liaison Officer for the newly established National Cooperative Bank. When the new Administration tried to abolish the Bank, he coordinated an effort which resulted in the Bank's privatization and independence from government control. The Bank is now the largest source of funding for these self help cooperatives.

In 1984, he took his present position as Chief Executive Officer of the National Peace Institute Foundation, a 15,000 member voluntary, non-profit public educational institution. He is responsible for all aspects of the Foundation, including it's educational program, administration, budgeting, personnel, fund raising, direct mail, legislative strategy and strategic planning. He represents the Foundation at public forums, with the press and in presentations with constituency groups, professional and academic associations, Congress, the White House and Executive Branch Agencies.

Since becoming Executive Director of the Foundation, he has directed the start-up of the Foundation's program directed at educating the American public on peacemaking and conflict resolution and the United States Institute of Peace, led the effort that defeated attempts by the Administration to have the law creating the Peace Institute repealed, formed a coalition of national groups that recommended a diversity of USIP Board candidates to the President and created five regional councils opening the Foundation's own governing board to the membership.

Senator HATFIELD. Would you pass that by me again about this group of churches that met with you?

Mr. CONLAN. The members of the Washington interreligious staff council are drafting some kind of unified position about what they think funding should be. And the representatives, who at this point are an informal group, are concerned that the grants of the Peace Institute right now are ideological, that their procedures are not methodical, that there isn't a brochure yet, that there hasn't been a public hearing, that there is still no permanent president, that a number of routine kinds of administrative things haven't happened yet at the Peace Institute.

And it is undermining their confidence in the venture, whether it might be a good idea. I spoke with them for about an hour and a half, and told them that I thought that—I think that reducing the funding was not the thing to do, but that Congress had other tools in terms of oversight, and that, in fact, they could have a more beneficial effect than trying to send the Peace Institute a message by reducing its funding.

So I don't think they have gotten to the point where they want to make a public statement.

Senator HATFIELD. Are these mainline denominational churches, Mr. Conlan?

Mr. CONLAN. At this point, I think it is a subcommittee of this organization. But the mainline—as you know, the Methodists, the Catholics, and the others have supported this in their peace papers and so on.

I don't think that they have moved. I do not want to say that they have moved publicly. But I am sure you have heard also concern from your constituents and others about whether the Peace Institute was going in the proper direction.

But yes, they are basically national councils.

Senator HATFIELD. Well, I agree with you, it is a creature of Congress. We established this by an amendment, of all things, to the military authorization bill, which they never thought would stay in conference, but it did.

And I know there are Members of Congress looking over this list who are original cosponsors, who are just as thoroughly committed today as we were when we joined together to form the authorization.

It seems to me that before this opposition spreads out into a community which should be in full support of the Institute, we ought to do some brainstorming on the strategy to counteract that.

Now, I know part of the problem is that the original membership of the Commission is appointed by the White House, which was never sympathetic to the Institute to begin with, and there were some of us who even thought that this was a group of pallbearers who were being appointed to try to give a quick burial to the Institute, and were highly suspect, as to why, or what credentials, certain individuals had who were appointed.

But I must say that I have been moved by a number of statements made by some of those I had some reservations about, who have come to believe that there is a significant role for this Institute to play.

Mr. CONLAN. That's the U.S. Institute. We are just the citizens group.

Senator HATFIELD. Yes; the Institute itself. I understand. And former Senator Jennings Randolph who has attended a number of your meetings, I believe, has indicated that the direction of the Institute is again moving along. Maybe it is not as fast as he would like to see, but certainly I think he has confidence in this.

Now you tell me where you think we in the Congress can be helpful to you in terms of the foundation.

Mr. CONLAN. Well, I think you are right about the Institute's basic direction is sound. I think that any starting up of a new institution is a difficult thing. I went through it once with the National Cooperative Bank, which you also were very active in.

Starting a new institution from scratch is difficult. I think the oversight function of the Congress is the way to deal with it. I think the way Congress should deal with it is to get proper funding, and I think the Institute, asking for $10 million this year is a positive step in the right direction.

The President only asked for $3.3 million. They have begun to establish their independence. I mean, that not only goes to funding, that goes for their being able to present testimony to Congress in the future without going through OMB and the executive branch.

But I think the kind of public airing of the various controversies around it right now would be beneficial, and would help convince people that Congress is serious about keeping an eye on this institution, and is serious about it doing what it has been set up to do.

And so we think from the point of view of the foundation, the best thing you could do would be to support it financially, and also support it spiritually, through the authorizing committee.

It is sort of a difficult, unwieldy way to do it.

Senator HATFIELD. Do you feel you have made some headway in the opinions of this group that met with you this morning as to their opinions when they came in to see you, and an hour and a half later?

Mr. CONLAN. I think so. I think there was some progress made, but I think even the initial reaction of Colman McCarthy 2 years ago when the legislation passed, who you normally think would automatically be for it, saying we should do away with it, I think institutionalizing peace research is the real key to what the Peace Institute is about, and the way to keep that alive, I think, is by Congress showing continued interest in it.

Because it is not going to come from the executive branch, obviously, not yet. It will in time. I think it is a good solid proposal.

Senator HATFIELD. Well, let me know if there is anytime you need any personal help.

SUBCOMMITTEE RECESS

Thank you Mr. Conlan for your testimony. The subcommittee will stand in recess until 9:30 in the morning when we will reconvene in SD-138, which is not this room, for further public witnesses to be heard.

[Whereupon, at 5:25 p.m., Tuesday, May 5, the subcommittee was recessed, to reconvene at 9:30 a.m., Wednesday, May 6.]

DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

WEDNESDAY, MAY 6, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:30 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Lowell P. Weicker Jr. presiding.

Present: Senators Harkin and Weicker.

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator WEICKER. The subcommittee will continue its public witness hearings, and today testimony will focus mainly on the National Institutes of Health. This week the subcommittee will hear testimony from over 200 witnesses, and because of the large number of witnesses, we have to request that each witness keep their oral testimony brief. All statements in their entirety will be included in the record.

So I would really appreciate if you would help us stay on schedule or extend the courtesy really not to this Senator or those that will occupy the chair, but rather your fellow witnesses, and keep your testimony to 3 minutes. The green light will go on when you start. A red light will go on when you are supposed to be through. And it is very embarrassing for the chairman—believe it or not, I do get embarrassed—to have to bring any of you to a close, because I know how far you have traveled and the effort that you have made to be here. But we are trying to accommodate, as I said before, a great number of persons and having them heard, and we just do not know any other way to handle the situation except to eliminate the whole business of public witness sessions, which I think are the most important aspect of the hearings. So if you would cooperate, it would be deeply appreciated.

Our first witness this morning is Dr. Alfred Munzer of the American Lung Association.

STATEMENT OF ALFRED MUNZER, M.D., AMERICAN LUNG ASSOCIATION

Dr. MUNZER. Thank you very much.

Mr. Chairman, the American Lung Association and the American Thoracic Society are delighted to have this opportunity to speak to the health and biomedical research programs in the fiscal year 1988 budget. I speak here today not only as the chairman of the Government Relations Committee of the American Lung Association and its medical arm, the American Thoracic Society, but more importantly as a practicing pulmonary physician who day in and day out is confronted by the ravages of lung disease.

The lung is the very delicate interface between man and his environment, and it suffers the constant onslaught of environmental dust, fumes, gases, bacteria, viruses, and the burden of smoking as well as countless workplace hazards. It is no wonder, therefore, that the prevalence of chronic obstructive lung disease has increased 75 percent from 1970 to 1985, and that chronic lung disease is now the fastest growing cause of death among the 10 leading causes of death in the United States.

Lung disease does not capture the headlines in the morning newspapers, but it is worthy of your attention and worthy of the specific appropriations recommendeded in our written statement, particularly in view of the fact that the overall cost of lung disease to the Nation is some $41 billion. NIH represents the largest source of funding for lung research in the United States. This research, principally conducted at the NHLBI, has contributed significantly to the remarkable progress that we have made and basic research has brought us to the threshold of clinical applications that must now follow.

We do have some very specific concerns in the proposed budget of the President. Project grants are the mainstay of research at the NHLBI, but one of the concerns that we have is that the actual cost incurred by researchers is always greater than the appropriated estimated costs, and that this leads to a downward negotiation of the grants of as much as 10 percent. This causes problems for the individual investigator, who must limit the scope of his research, and this also results in a lowering of the goals set by the institute for its overall research program.

The President's proposal would freeze the funds and number of specialized centers of research. These centers are extremely important, and we do support at least $117.5 million for their growth.

Thank you very much, Mr. Chairman.

PREPARED STATEMENT

Senator WEICKER. Thank you very much, Dr. Munzer. The entire text of your remarks will be placed in the record. I appreciate your testimony.

[The statement follows:]

STATEMENT OF ALFRED MUNZER

Mr. Chairman and Members of the Subcommittee, the American Lung Association and the American Thoracic Society, ALA's medical section, thank you for this opportunity to comment on the health and biomedical research programs in the FY 88 budget. I am Alfred Munzer, M.D., Chairman of the ALA/ATS Government Relations Committee. I am a physician specializing in diseases of the lung and am Director of Critical Care at Washington Adventist Hospital.

At the outset, Mr. Chairman, I would like to thank you for the Subcommittee's continued support of biomedical research programs. This support is critical in view of the further attempts by the Administration to reduce support for health related research.

The ALA/ATS has reveiwed the lung related research, training and demonstration programs for the National Heart, Lung and Blood Institute as well as for other institutes and agencies conducting activities related to the prevention and control of lung disease. Our recommendations represent our best estimate of the adequate resources necessary to continue these programs at the level of priority indicated by the magnitude of the lung disease problem.

SUMMARY: FY 88 HEALTH APPROPRIATIONS RECOMMENDATIONS

National Heart, Lung and Blood Institute	$1,129.7 M
National Institute for Allergy and Infectious Diseases	733.0 M
National Institute for Environmental Health Sciences	251.0 M
National Institute for Occupational Safety and Health (CDC)	83.9 M
Tuberculosis Project Grants (CDC)	11.0 M
Office of Smoking and Health (CDC)	5.0 M
Office of Health Promotion (CDC)	5.0 M

ALA/ATS has focused its concerns on those programs affecting the prevention and control of lung disease. These diseases constitute a devastating and growing health problem in the United States. Lung diseases range from the chronic and often fatal diseases of the newborn, to serious infectious diseases, to those related to environmental exposures--workplace and ambient air, and to diseases attributable to cigarette smoking--the leading cause of preventable death. The absolute prevalence of emphysema and chronic bronchitis increased 75% between 1970 and 1985. The number of persons with Chronic Obstructive Pulmonary Disease increased 60.4% between 1970 and 1985. COPD is now the most rapidly increasing of the 10 leading causes of death. The combined direct and indirect cost of lung diseases was a staggering $40.9 billion in 1986.

Grim as this statistical picture appears, it is not hopeless. Federal programs for disease prevention and health promotion, biomedical research, environmental and occupational health hazard control, and professional education and training have greatly improved the detection and treatment of many lung diseases. Furthermore, many exciting medical advances place us on the threshold of new diagnostic methods.

THE NATIONAL HEART, LUNG AND BLOOD INSTITUTE

The National Institutes of Health represent the largest source of funding for lung related research in the U.S. This research program--principally within the National Heart, Lung and Blood Institute--has contributed significantly to the remarkable progress made in the past decade toward unmasking the basic biological events underlying the development of lung diseases, and devising treatments and preventive strategies for these diseases. The NHLBI research portfolio supports several research mechanisms including **Research Projects, Research Centers** and **Research and Development Contracts.**

Research Projects: The Project Grant continues to be the keystone of the NHLBI research program. The largest portion of the research portfolio is dedicated to this mechanism. An exciting new area of research for the Institute involves investigation utilizing the new technologies in molecular biology. The Institute will soon announce the establishment of Programs of Excellence in Molecular Biology. This program will fund multidisciplinary research units designed to integrate molecular biology technologies with cardiovascular and pulmonary research.

A major problem in the management of the Projects mechanism relates to the average cost of a grant. Each year the average cost of an NHLBI grant has increased more than the estimated average cost appropriated by Congress to support the new and competing research projects. This increase is due in large part to the proportion of clinical research sponsored by NHLBI, which has higher costs due to patient care, personnel and equipment needs. It is also due in part, to the annual increase in the cost of doing research, about 10%. This increase is not inflation in the strictest sense, but represents the development of evermore sophisticated and expensive research technologies.

A "downward negotiation" is therefore required to offset this difference. In FY 87 this reduction from the recommended level may reach as much as 10%. The difference between the estimated average cost and the actual cost has significant impact on the integrity of the research program. For the individual investigator, the ability to accomplish all the objectives set out in the grant becomes more difficult and, in some cases, this reduction may make completion of the grant impossible. For the Institute, reprogramming becomes necessary to minimize reductions, causing losses in other budget categories. A funding level of $675.2 million would provide for growth in this mechanism and address the problem of the average cost of the grant.

Research Centers: The NHLBI supports 60 Specialized Centers of Research--SCORs. The SCOR program is a unique research mechanism that includes both basic and clinical research emphasis to ensure that advances in the basic sciences are quickly translated into applications at the clinical level. This research mechanism directly benefits patient and public health. The President's proposal freezes the number of Centers and funding. The lack of additional funds for the existing Centers creates a budgetary dilemma. Center awards are for a five-year period and during the renewal process significant budgetary growth is anticipated to counter previous inflation and to allow for adequate resources throughout the period of the award. The President's proposal does not provide for this growth. Further, the proposal restricts the number of Centers, not allowing for growth in the size of the program. There are many new areas of research where the SCOR mechanism would be useful. For example, the Institute's Advisory Council recommends the development of a Centers program to study sleep disorders related to respiration and circulation. Estimates of the prevalence of Obstructive Sleep Apnea Syndrome range from 1-3% of the adult population. The necessary research activity ranges from basic science to define the precise neural mechanism, to clinical activity to develop rational therapeutic approaches. The SCOR mechanism is especially well-suited to this range of activity.

In order to provide for adequate budget resources and a growth in the SCOR program, $117.5 million is necessary. Further, the number of Centers should be increased from 60 to 75 to allow the Institute to begin study of many emerging clinical problems.

Research Contracts: The NHLBI supports a number of Clinical Trials through the Contracts mechanism. In the Division of Lung Diseases, a major trial has been initiated to study Chronic Obstructive Lung Disease. This Trial represents an eight-year obligation by the Institute to determine if those persons considered most susceptible to the development of COPD can avoid these problems if they stop smoking, and to see if progression of their disease can be slowed by the use of certain bronchodilator medications.

The President's proposal allows for no additional support in this mechanism. This apparently modest proposal is misleading. For example, during the first year of a Trial, moderate costs are encountered as the study design and research protocol are developed. During the later years, major budgetary growth is necessary to absorb the costs related to equipment acquisition and patient recruitment, assessment, treatment, and surveillance--critical activities currently under way for the COPD Trial. A level of funding for the Contracts mechanism of $90.4 million would allow an increase in the current level of support for this Trial and other Trials underway as well as expansion of activity supported by the Contract mechanism.

Continuing Program Issues for the NHLBI: A continuing problem for the NHLBI is the growing imbalance in the research program. The distribution of funds among research mechanisms has markedly changed in recent years until the Institute is no longer able to maintain a balanced program. The percentage increase of funds to Research Projects has been made at the expense of the other research mechanisms. Projects received 50.6% of the total Institute funds in 1980, growing to 63.4% in FY 87. However, Centers and Contracts have declined--Centers were funded at 11.8% in 1980, declining to 9.7% in FY 87 and Contracts were funded at 15% in 1980, declining to 6.7% in FY 87. As a consequence, the Centers and Contracts mechanisms are being severely compromised.

A final issue with direct impact on the NHLBI research program is the lack of flexibility in program management. Since August 1985 the funds apportioned to the Institute are specified for each mechanism of support, with further specification of non-competing and new or competing awards. The inflexibility created by this process seriously limits the ability of NHLBI to manage programs to meet the changing research needs and priorities--a role the peer review process, Advisory Councils and Research Committees are designed to address. The process of requesting to reprogram the budget is very slow and restricted and as a consequence, some opportunities are missed. Further, the imbalance among support mechanisms is accentuated. We request that Congress restore the flexibility in program management that existed prior to 1985.

TUBERCULOSIS PROJECT GRANTS

Originally organized to combat tuberculosis, ALA/ATS continues its commitment to its elimination. ALA is again surprised by the short-sighted action of the Administration in seeking to phase-out funding for this program. First authorized in 1982, the TB Project Grants administered by the Centers for Disease Control provide cooperative agreements for TB control activities to state and local health departments in high incidence areas. The ALA/ATS recommends an appropriaton of $11 million for this program.

In 1980, 28,000 cases of TB were reported in the U.S., a 0.6% increase over 1979. Such an increase has been seen only twice in the past 25 years. A major contributing factor was the large number of cases in the Indochinese refugee population. The years 1981-84 saw a return to the significant rate of decline seen earlier--6-7% annually. However, once again in 1985 the expected rate of decline did not occur, slowing dramatically to only 0.2%. The 22,575 cases reported to CDC in 1986 represent a 1.7% increase over 1985. In addition to the problems of drug resistent TB, TB in children and the homeless, new problems have emerged related to an increasing incidence of TB infection in those with the AIDS virus.

The TB Project Grants program should be intensified in light of the current and emerging transmission problems rather than phased out. Moreover, this program, according to the CDC, resulted in an estimated savings of $15-20 million in hospital costs--25% of which would have been charged to Medicare or Medicaid.

* * *

In conclusion, Mr. Chairman, the federal government provides a significant source of funding to a wide range of programs directly impacting the prevention and control of lung disease. In the absence of adequate federal support, neither state nor local governments, nor the private sector are financially capable of continuing this level of programing. While it may appear tempting to assume that the private sector could be encouraged to accept some responsibility for support, this support might come at the high price of limited investigation or reversal of research direction.

Reductions to the extent proposed by the Administration will lead to the dismantling of the federal research program. The President has recommended a 12% increase government-wide for research and development activity--8% for the Department of Defense and 16% for the National Science Foundation but a 10.5% decrease for the National Institutes of Health. This reduction will be very costly not only in terms of the health of our citizens but also in terms of the health of our economy. This policy of reduction continues at a time when national and international industries are developing around our new biomedical technologies. Great advances made over the last twenty years are now being capitalized upon in cell biology, molecular biology, and other biosciences. Past effort has clearly placed the U.S. in the forefront internationally. This level of effort must at least continue and preferably should increase if our federal research program and supporting industries are to remain competitive.

The health and biomedical research programs of the federal government give strength and leadership to our entire health care system. We are now looking at opportunities in biomedical research that will lead to significant improvement in the health of the nation. Thus, now more than ever, vigoruous support and adequate resources are essential.

STATEMENT OF FRANCIS J. KLOCKE, M.D., AMERICAN COLLEGE OF CARDIOLOGY

Senator WEICKER. The next witness is Dr. Francis Klocke of the American College of Cardiology.

Dr. KLOCKE. Senator Weicker.

Senator WEICKER. Dr. Klocke.

Dr. KLOCKE. Thank you. I am Fran Klocke, and I am here as president of the American College of Cardiology. As you perhaps know, we are a 15,000-member medical specialty group. We are dedicated to the optimum treatment and prevention of cardiovascular disease, and, of course, we are especially interested in the work of the National Heart, Lung, and Blood Institute.

Senator, without going into detail, I would just first like to assure you of the gratitude you have from the scientific community and really also from the patients we take care of for the efforts that you have made over the years in terms of trying to improve the health care and health care research in this country, and it has been a great service to all of us.

Senator WEICKER. Thank you very much.

Dr. KLOCKE. You are aware, of course, of the progress that has occurred in cardiovascular disease. There has been a reduction of 40 percent in cardiovascular disease deaths in the past 20 years, and that certainly is the good news. The bad news side of it is that it still is correct, I believe, that nearly one out of two, that is, 47 percent of deaths in the United States annually still relate to cardiovascular disease. There is a great deal more to be done, 1 out of 4 Americans have high blood pressure, and 21 million Americans have some form of heart disease.

We believe that the NHLBI programs currently represent a balanced approach to the problem and are supportive of them. We are also supportive of the NHLBI initiative to try and expand the application of molecular biology techniques to heart disease, and in view of the situation that we see ourselves in, we do find the President's proposed budget disappointing. For every two grants that are funded now, we believe that there are three meritorious applications that are not able to be funded, and in the area of research training, for every two applications, only one is able to receive funding, and our bottom-line recommendation—the details are in the written testimony—or an increase in the NHLBI budget to $1.097 billion. That would be an increase of about 18 percent.

In regard to the specific recommendations, I call attention to two items, one of which is research training. Although I am a cardiologist, and I think that one certainly can make a case that the numbers of physicians giving clinical care in the country is substantial, on the other hand, in the research area I do believe that the data indicate that there still remains a shortage of physician researchers, and we have therefore asked that research training awards and research career development awards be increased, and would call particular attention to that.

The only other point I would make, Senator, is that we certainly are grateful for the support that NHLBI has had in the past. I think their budget increased by 8.3 percent last year, and that certainly was a substantial help. On the other hand, I think it is also correct that that 8.3 percent was exceeded by 10 of the other 11 institutes in the Heart, Lung, and Blood Institute, and in one sense that is a bit perplexing because I guess from our point of view, of course, heart disease still is the No. 1 killer, and we are obviously anxious to bring to bear all the resources on the problem that we can.

PREPARED STATEMENT

We appreciate being able to be here, and thank you very much.

[The statement follows:]

STATEMENT OF FRANCIS J. KLOCKE

Mr. Chairman, and members of the Subcommittee, I am Dr. Francis J. Klocke, Chief of Cardiology at the State University of New York at Buffalo. I am pleased to participate in today's deliberations as representative of the American College of Cardiology, of which I am President. The College is a 15,000 member medical specialty society dedicated to the prevention and optimum treatment of cardiovascular disease. As such, the College is vitally interested in the research and training components of the National Heart, Lung, and Blood Institute (NHLBI) and in the continued scientific progress of this vital Institute.

Mr. Chairman, allow me to begin by expressing the deep gratitude of the scientific research community for your own leadership and for that of Senator Weicker, and for the dedication of the Subcommittee in supporting the National Institutes of Health in general and the NHLBI in particular. This subcommittee's vigorous backing during these difficult times has been an inspiration to all of us who look to the NIH for support and leadership.

Heart disease remains the leading cause of death among Americans, accounting for almost half of all deaths in 1985.

The National Heart, Lung, and Blood Institute estimates that 58 million persons, or 25% of the U.S. population, have hypertension. Of these, 21 million have heart disease, 7 million have coronary heart disease, 3 million have cerebrovascular disease, and 3 million have peripheral vascular disease. Approximately one-fourth of people with these diseases are limited in their activities, and about three-fourths of that number are under age 65. In 1984, the economic cost attributable to heart disease in terms of lost productivity and medical care costs was an estimated $110 billion.

Despite these grim statistics, we are very pleased to note the enormous progress made in recent years in the fight to eliminate heart disease. Between 1965 and 1985, the combined death rate for all cardiovascular diseases declined by 40%. This decline is almost three times faster than the decline for all other diseases combined.

The rapid decline in deaths attributed to heart disease can largely be attributed to the basic and applied research activities of the NHLBI.

THE INSTITUTE

Mr. Chairman, this distinguished committee needs no detailed introduction to the fine work which is under way at the National Heart, Lung, and Blood Institute. Recent examples of valuable research activities within the NHLBI include the renewal of the Specialized Centers of Research in Atherosclerosis, an expansion of the Thrombolysis in Myocardial Infarction (TIMI) trial, solicited programs in the basic mechanisms of nutritional influences on blood pressure regulation, and in age related changes in hypertension. In addition, the Institute solicited multiclinic participation in an investigation of the merits of percutaneous transluminal coronary angioplasty (PTCA) versus coronary artery bypass graft surgery (CABGS) for the relief of severe, symptomatic multivessel coronary heart disease. The Division is also working on the development of model systems for cholesterol screening in the community.

Looking to the future for a moment, NHLBI is considering a program to apply molecular biology approaches to the study of heart disease.

Molecular biology approaches have made significant advances in cancer and other research. To date, however, heart research has not capitalized on and utilized modern approaches of molecular biology. Yet, there is evidence that this approach could be extremely productive.

A blue ribbon panel has extensively reviewed various alternatives and has suggested the development of a network of heart, lung, and blood research based on molecular biology approaches. In response to this suggestion, NHLBI has outlined a program based on an initial solicitation of a number of seven year awards with the possibility of renewal for another seven year period. The optimum program is estimated to cost $15 million per year. At the end of the renewal, the special program would be discontinued and investigators could continue to be supported through the competitive process.

THE PRESIDENT'S BUDGET

In light of the tremendous advances in heart research which have occurred or are emerging, the President's Budget for the NHLBI for FY 1988 is extremely disappointing. The Administration proposal would reduce overall spending by the Institute by about $56 million compared with the FY 1987 appropriation. This amounts to a 7% reduction. Our recommendation is that Congress should forego any reductions in NHLBI funding, and should instead increase funding by approximately 18%.

NON-COMPETING-PROJECT GRANTS

Under the President's plan, non-competing project grants would be increased in number from 1,872 to 1,931, while the funds available would decline from $404.2 million to $385 million. If the Administration budget were enacted without amendment, it would be necessary for NHLBI to negotiate non-competing grants downward by more than 16%. This would cause a severe disruption of ongoing projects, with much valuable research aborted. Competing research grants would also be reduced about 16% on average, a significant loss in terms of foregone medical breakthroughs. Instead, we recommend that 2,016 non-competing grants be awarded, with a funding level for this category of $464.3 million.

COMPETING RESEARCH PROJECT GRANTS

The Presidents budget would reduce the number of competing grants from 966 to 807 and the funding available from $404.2 million to $385 million. This would be an unfortunate retreat from NHLBI's commitment to new and innovative research. We recommend instead that 1,092 competing grants be awarded at a funding level of $464.3 million.

SPECIALIZED CENTER OF RESEARCH (SCOR)

The President's FY 1988 budget freezes the number and support levels for Specialized Centers of Research (SCOR's) at 60 and $88.9 million respectively. SCORs were instituted to advance basic knowledge and to generate the most effective techniques and methods of clinical management and prevention in the areas of arteriosclerosis, hypertension, ischemic or coronary heart disease, thrombosis, and blood resources. Some 1200 scientists currently receive support under the SCOR program. We recommend that 75 SCORs be funded in FY 1988, with an allocation of $117.5 million. This level of funding would enable NHLBI to undertake important research efforts in molecular biology, in dysrhythmia, and in pediatric heart disease.

RESEARCH TRAINING

The number of full time research training positions would remain the same in 1988 as in the previous year if the President's budget were accepted. Although there may be adequate or even excessive numbers of physicians being trained for clinical practice, this is certainly not the case in medical research. A recent survey of cardiology training directors conducted by the American College of Cardiology revealed that 80% believe that additional numbers of cardiologists are needed in research, and only 1% supported a decrease in the number of research cardiologists. Physician researchers are pivotal to the success of our entire cardiovascular research effort, since they are able to give clincial relevance to basic discoveries and many are directly involved in patient-oriented research. We recommend that the number of research training awards (National Research Service Awards) be increased from 1,649 to 2,206 and that the appropriation be raised from $39 million to $55 million.

RESEARCH CAREER AWARDS

In FY 1987, 407 awards were made at a total appropriation of $24.5 million. We recommend that a total of 472 awards be made in FY 1988 at a total appropriation of $30.7 million. The research career award program was instituted in 1963 to support individuals with outstanding research potential who require additional training and experience in a productive scientific environment in preparation for a career of independent research. This is an important component of the effort to maintain a cadre of trained researchers in cardiovascular medicine.

OTHER RESEARCH GRANTS

Other research grants, including cooperative clinical research grants, conference grants, and scientific evaluation grants, are currently funded at a level of 135 grants totaling $15.5 million. Our recommendation is that these grants be increased to a level of 154, with an appropriation of $20.3 million.

RESEARCH CONTRACTS

Research and development contracts are provided by NHLBI for the purpose of developing or applying new knowledge or testing, screening or evaluating a product, material, device or component for use by the scientific community. This category supports clinical trials which have been very successful in influencing medical practice, often with a consequent decrease in medical care costs. In FY 1987, NHLBI funded some 215 contracts at $75 million. It is our recommendation that NHLBI fund 267 contracts in FY 1988 at an appropriation level of $90.4 million.

INTRAMURAL RESEARCH

Intramural research conducted by NHLBI is funded at the level of $64.5 million in the current fiscal year. We recommend an increase of $14 million for FY 1988, to bring this line item to the level of $78.5 million.

RESEARCH MANAGEMENT AND SUPPORT

For research managment and support, we recommend an increase of $8 million above the FY 87 level, bringing this item to a level of $45.1 million for FY 1988.

CONSTRUCTION

We recommend a modest increase of $1 million in this category, bringing the level to $3.25 million for FY 1988.

OTHER ISSUES

COMPARISON OF NIH INSTITUTE BUDGETS

We note that although the NHLBI budget increased by 8.3% in 1987 compared with the previous fiscal year, this increase ranked eleventh of the twelve Institutes. Moreover, the annual increase for NHLBI has slowed considerably in recent years. We find this fact to be perplexing given that, as we stated earlier, heart disease will kill as many Americans this year as all other causes combined.

PROGRAM BALANCE

In recent years, the percentage of the Institute's budget that is allocated to research projects has steadily increased while the allocation for other categories has declined. Although research projects are an important and essential part of the NHLBI effort, it is important that the Institute's other efforts remain strong. Research centers, for example, support multidisciplinary clinical research which is supported by no other mechanism. Yet, the budget allocation assigned to this category has declined from 11.8% to 9.7% between 1980 and 1987. During the same period, the portion of the budget devoted to research projects has increased from 50.6% to 63.4%. This imbalance should be corrected so that all aspects of the NHLBI effort are strongly supported.

HEALTH EDUCATION PROGRAMS

Beginning in 1972, the NHLBI has been required by law to "conduct a program to provide the public and the health professions with health information with regard to cardiovascular and pulmonary diseases." Pursuant to this legislative directive, the Institute initiated a number of health education programs, i.e., the

- National High Blood Pressure Education Program
- Cardiovascular Risk Factors at the Worksite
- Asthma Self Management Program
- National Cholesterol Education Program

The Institute is now designing a National Blood Resources Education Program.

Each of these programs has conveyed valuable information to the public concerning the prevention and treatment of cardiovascular, lung, and blood diseases.

Funding for these programs comes from two budget categories: The Research Management and Support (RMS) category, and the Research and Development (R & D) Contract category. These two categories have been subject to declining budget allocations in recent years.

The R & D contract category supports mostly clinical trials, and other population-based studies (epidemiology) and development programs, including the artificial heart program. Funds from this category are needed to support some activities of the education programs, such as conferences, surveys, data analysis, and education material development. Since 1980, R & D contracts have decreased in funding from $15 million to $6.7 million.

The RMS category supports many items, such as public service announcements, publications and other mass media activities of the education programs, and little or no flexibility exists. Since 1980, the RMS funds have declined from $5.8 million to $4.3 million.

We recommend that funding for RMS and R & D be increased to a level necessary for the continued success of the Institute's health education programs.

NATIONAL LIBRARY OF MEDICINE

The College would also like to take the opportunity to voice its strong support for the continuing operation of the National Library of Medicine (NLM), an integral and vital arm of the national research effort.

Established in 1836 with only a handful of medical texts, the NLM has grown into the world's largest medical research library, with over 3.5 million books, journals, technical reports, theses, photographs, and audiovisual materials. The American College of Cardiology, through its Griffith Resource Library, benefits directly from the NLM's Medical Literature Analysis and Retrieval System (MEDLARS) and its subcategory, MEDLINE. College staff and continuing medical education program participants can access the MEDLINE system of some 4 million medical citations through our in-house computer system, and can perform up-to-the-minute research on a multitude of medical subjects almost instantaneously.

In addition to its vast collections and innovative computerized retrieval systems, NLM is responsible for a number of other programs of national significance. These include a program of grant assistance for medical libraries, for training, and for research in biomedical communications. The NLM Regional Medical Libraries provide a nationwide system of convenient information centers.

The Administration request of $64.399 million for NLM for FY 88 represents an extremely modest increase of 4% over the FY 87 level. The dispersal of research results to the practicing physician is an integral and often neglected aspect of the overall research effort. Knowledge gained which sits on a shelf is knowledge wasted and human suffering prolonged. We urge the Congress to maintain a high level of support for the NLM with an increase of 18% to a level of $75.9 million.

CONCLUSION

Mr. Chairman, members of the Subcommittee, on behalf of all of us who are on the front lines of cardiovascular medical research, thank you again for your strong support of the activities of the

National Heart, Lung, and Blood Institute. As we have said, much progress has been made in the fight against our nation's number one killer, heart disease. Yet much remains to be done. Unfortunately, for every two worthwhile research projects funded by the Institute, at least three meritorious grant applications must remain unfunded due to budgetary considerations. For every two applicants for research training funds, one must be turned away. The loss to the nation in terms of missed opportunities and delayed progress is immense. We are all aware of the budget difficulties facing our nation, but we think that our society will ultimately be judged, at least in part, by how well we care for our sick and dying.

We ask that this Subcommittee, in discharging its responsibilities, bear in mind the important work being done at NHLBI.

Senator WEICKER. Dr. Klocke, thank you very much, and I very much appreciate your views on the budget. I could not concur with them more heartily. I would suspect also that your comments are well stated in that we should not lose sight of the problems that are raised in the area of cardiology. They have not gone away. Some new problems have come up in the meantime which have diverted resources to other areas. But I think it is very important to point out that this only underlines the imbalance in the overall budget. In effect what we have got to do is shift around the resources within our science and medicine budget to meet these new problems rather than getting new money into the science and research budget, thereby allowing us to pursue all the matters we have been pursuing and also handle the new problems as they arise. And believe me, it is very upsetting to me as I see that we have to shift money from cardiology or the neurosciences or whatever the problems are as they arise, rather than to get the needed funds to enable us to address these problems while maintaining a steady research basis insofar as the others are concerned. Thank you.

STATEMENT OF ALFRED SOFFER, M.D., EXECUTIVE DIRECTOR, AMERICAN COLLEGE OF CHEST PHYSICIANS

Senator WEICKER. Alfred Soffer, the executive director of the American College of Chest Physicians.

Dr. SOFFER. Senator Weicker.

Senator WEICKER. Mr. Soffer, nice to have you here.

Dr. SOFFER. Thank you, sir.

I teach and practice in cardiology, but I am here as executive director of the college. We are a group of 13,000 cardiologists and pulmonologists, cardiovascular surgeons representing the disciplines of respiration and circulation, and, therefore, our primary interest today is commenting on the activities of the National Heart, Lung, and Blood Institute and the National Institute of Allergy and Infectious Diseases.

We wish to state that we unequivocally support the concept of both basic and applied research, both for prevention and for treatment. Now, as was noted by Dr. Klocke, the cardiovascular disease is still the No. 1 killer in the United States, but respiratory disease is the second most common cause for incapacitation, so the cost, the financial cost to the country of man hours lost in a premature death is enormous, and, therefore, we would like to say that under the able leadership of Dr. Claude Lenfant, we are impressed with the advances made in prevention and treatment of cardiovascular disease and pulmonary disease. We are all reading about the campaign to decrease cholesterol in our diet. It is a national campaign coast to coast. We do not understand that much about lipids and their relationship to heart disease, and we hope that continuing research of the Heart, Lung, and Blood Institute will give us a better idea of the exact nature of fats and heart disease.

Now, pulmonary disease, particularly emphysema, asthma, bronchitis, influenza, is also a major killer and incapacitator in the United States, so these two aspects of the Heart, Lung, and Blood Institute are of enormous concern to us and the American College of Chest Physicians would like to recommend a budget of $1.4 billion to maintain the momentum of clinical trials. If young men and women who are currently in academic research for heart and lung disease are discouraged because, if they do not see tenure, they do not see continuity, they are going to go into practice, and we would like to give them the assurance that once they begin a research project they can continue.

As regards infection and allergic diseases, we suggest a budget of $800 million again for research in viral diseases, which has an effect not only in terms of the pulmonary aspects but across the spectrum of viral disease in every type of viral disease in every organ of the body.

PREPARED STATEMENT

We are very grateful for the opportunity to appear before this distinguished committee, and thank you for this privilege.

[The statement follows:]

STATEMENT OF ALFRED SOFFER

I am Dr. Alfred Soffer, Executive Director of the American College of Chest Physicians (ACCP).

On behalf of the ACCP, I am submitting these views for inclusion in the formal hearing record. ACCP is a professional medical specialty society of more than 12,000 physicians, scientists and educators who specialize in diseases of the heart, lungs and circulatory system. The College appreciates this opportunity to offer our views to this Committee on fiscal year 1988 appropriations for the National Heart, Lung and Blood Institute (NHLBI), and the pulmonary activities of the National Institute of Allergy and Infectious Diseases (NIAID).

I would like to preface this statement by emphasizing that ACCP enthusiastically supports the activities of the National Institutes of Health, particularly those of NHLBI and NIAID. We unequivocally support the Institute's commitment to support the entire spectrum of research, both basic and applied; both for treatment and prevention. The investment in these areas over the past year has been extremely productive.

Under the able leadership of Dr. Claude Lenfant, tremendous strides continue to be made in combatting cardiovascular and cardiopulmonary diseases. ACCP's recommendations are aimed at maintaining that momentum. Although we recognize the strains that have been placed on the federal budget in recent years, the fact that diseases of the heart and lungs continue to pose the most serious threat to our nation's health must not escape us. The desirability of exercising fiscal austerity should not be lost to this fact.

Cardiovascular diseases afflict more than 60 million people and cause almost one million deaths each year. Some 58 million persons have hypertension, 6 million have coronary heart disease, and 2 million have cerebrovascular disease. In addition to the untold costs in human suffering, cardiovascular diseases are responsible for a loss of about one hundred billion dollars each year in productivity, wages and costs of medical care.

It is therefore imperative that NHLBI be afforded sufficient resources to continue its efforts to combat the full panoply of cardiovascular diseases: hypertension, cereberal vascular disease, coronary heart disease, arrhythmias, heart failure and shock, congenital and rheumatic heart diseases, cardiomypathies and heart and circulatory system-infection. Although the NHLBI has made considerable progress in the cardiovascular area, the battle against these diseases is far from over.

It is therefore vital that new information be used to gather further insights about cardiovascular diseases. For example, NHLBI supported investigations have elucidated the mechanisms involved in the regulation of levels of blood lipids by receptors on the surface of the liver and other cells that produce particles of low density lipoproteins (LDL) and remove these from the blood stream. The LDL is taken into the cells where it is broken down and yield its cholesterol to serve the cell's needs. When the receptors are defective, LDL cannot be removed normally, and it accumulates to high levels in the blood plasma. The build-up accelerates the atherosclerotic process. Mutations in one of the genes for the receptors can produce heterozygous familial hypercholesterolemia, which is a cause of heart attacks in middle-aged people. Persons who inherit one of these mutant genes for the LDL receptor usually develop heart attacks.

Genetically induced alterations in the LDL receptor have now become the subject of intensive research. Recently, it has become possible to study the molecular genetics of these mutations as a result of the cloning of complementary DNA (cDNA) for the human LDL receptor and the subsequent isolation of genomic clones covering most of the LDL receptor gene. This information would be used to develop insights to the management of the inherited disease, familial hypercholesterolemia, and methods to intervene and control high blood cholesteral.

NHLBI has provided effective leadership in this battle against cardiovascular diseases. Research supported by NHLBI has contributed to such achievements as open heart surgery, cardiovascular and respiratory intensive-care units, diagnostic instruments for use in lung disease, and elimination of hepatitis B as a transfusion hazard. ACCP applauds these achievements. Furthermore, the College supports NHLBI's ongoing basic research efforts involving such areas as: the relationship between behavior and coronary heart disease, the use of immunosuppressive therapy to facilitate heart-lung transplants, to name a few.

NHLBI's concerns are far broader than cardiovascular diseases. NHLBI has also achieved an excellent strategy to meet the serious health problems posed by lung diseases.

Eighteen million Americans suffer from chronic lung diseases. Moreover, lung diseases account for 47 percent of all deaths under one year of age. Thus, diseases of the lung are the sixth leading cause of death in the United States.

In the area of lung disease, the NHLBI focuses on six major areas: the structure and function of the lung; emphysema and chronic bronchitis; pediatric pulmonary diseases; fibrotic and immunological interstitial lung disease; respiratory failure; and pulmonary vascular diseases.

NHLBI's commitment to the study of diseases of the heart and lung is evidenced most clearly in its integrally-linked chain of research methodologies. Comprised of basic research, applied research, clinical investigation and demonstration/health care delivery programs, this system demonstrates the tangible advances which have been made available to the American public through the sponsorship of NHLBI.

In order to meet its mandate, the NHLBI needs to utilize a number of mechanisms to support research. For instance, most investigator initiated research projects support basic research and small scale clinical studies. Research centers are used to support multidisciplinary research focused on major disease entities and to assure that the fundamental research outcomes are rapidly made available to the clinical arena. Research and Development contracts are the best mechanism to support clinical trials and other population-based studies.

Some of the major NHLBI Clinical Trials funded in the mid-1970's that are still ongoing include: studies of Left Ventricular Dysfunction, Systolic Hypertension in the Elderly Program, Cardiac Arrhythmia Pilot Study, Diagnosis of Pulmonary Embolism Trial.

Time does not permit me to discuss the nature of these Clinical Trials in detail. These clinical trials are designed to test, in a carefully controlled setting, the efficiency and safety of preventive and therapeutic regimens before these regimens are introduced into practice. The results of clinical trials are critical. They ensure that unwarranted hospitalizations and premature surgery is avoided, thus helping reduce the costs of health care for our nation. Over the entire century, the gains achieved through expansion in medical research have always far exceeded the level of federal investment.

Given the demonstrated economic soudness of biomedical research activities increased appropriation levels for NIH, and particularly NHLBI, should be a national priority. A modest increase, at a minimum sufficient to counteract the rate of inflation for biomedical research activities, should be sought. The ACCP believes that in order for NHLBI to be able to continue to fulfill its mandate and provide the leadership which is crucial to our national biomedical research effort, an appropriation of 1.4 billion is necessary for fiscal year 1988.

The National Institute of Allergy and Infectious Diseases, NIAID, sponsors important research projects which have broad implications in the respiratory field. Studies involving influenza viruses, and respiratory syncytial and parainfluenza viruses, provide important additions to our current level of knowledge of degenerative chronic diseases. Because of the importance of NIAID's research efforts related to viruses, and its study of such diseases as pneumonia and menigitis, ACCP strongly supports increased funding, to a level of 896 million, for NIAID.

In sum, the College wishes to express its support for an appropriation level of $7.7 billion for fiscal year 1988 for the National Institutes of Health (NIH). This recommended level of funding would be consistent with our national commitment to biomedical research and would translate into an appropriate, sound, and progressive level of NIH research activity which accurately reflects its vital mandate.

Today, the ACCP continues to lend its support to those research efforts which are aimed at the ultimate approach to cost-saving -- prevention. NIH appropriation levels must be increased to insure that our progress toward that goal is not thwarted. The Federal Government must not turn its back on biomedical advances of the future which could yield billions of dollars in health care savings. Funding levels consistent with the important goals and essential mandate of NIH must be achieved. On behalf of ACCP's membership, I would like to thank you for affording us this opportunity to present our views.

Senator WEICKER. What do you think, Dr. Soffer, of the administration's proposal to add $91 million for AIDS and at the same time cutting by $649 million the basic research budget at NIH?

Dr. SOFFER. Well, AIDS is a viral disease, and I think it would be a mistake to differentiate between basic research and viral disease in one discipline versus another. The answer may come from serendipity, from research in viral disease, so I really would not want to characterize one bit of research as more important than the other.

Senator WEICKER. Would it be fair to state that in effect adding $91 million for AIDS and cutting basic research by $649 million means that you have cut the fight against AIDS and everything else by $558 million?

Dr. SOFFER. I think so, sir.

Senator WEICKER. There has been no add-on at all?

Dr. SOFFER. I think so, sir.

Senator WEICKER. Thank you very much.

Dr. SOFFER. Thank you.

STATEMENT OF ALAN SCHREIBER, M.D., AMERICAN COLLEGE OF HEMATOLOGY

Senator WEICKER. Dr. Alan Schreiber, the American College of Hematology.

Dr. SCHREIBER. Senator, I represent the more than 3,000 hematologists involved—who are physicians involved and scientists involved in biomedical research and patient care across the country. On behalf of my colleagues I would like to first thank particularly you and the members of your committee for their sincere support over the last several years. Over the next couple of minutes I would just like to review with you some of the major accomplishments that we have made over the past year.

AIDS is a disorder which terrifies all of us. But rarely in the history of biomedical research has progress been made so quickly in any given disorder. We have characterized the offending agent, determined what the offending agent is. We have determined the cell, which is a blood cell, which the offending agent infects. We have determined how it infects that cell and the dysfunction which it imparts to that cell, and now scientists are involved in defining mechanisms to interrupt that biologic process, which will clearly have therapeutic implications in the future.

Another blood cell which is very important is the blood platelets. It is an adhesive blood cell which interacts with the blood vessel wall components, and recently we have determined that it elaborates a growth factor called platelet derived growth factor, which causes proliferation of cells in the blood vessel wall which is very important in the pathogenesis of heart disease and stroke. So this gives us a new direction to go in interrupting the biggest killer in this country, heart disease and stroke. The understanding of growth factors in their regulation has led to our delineation of oncogenes, new genes which we now understand and have discovered which control the elaboration of these growth factors. And we now know that the regulation and expression of those oncogenes is what is the determining factor in the beginning of malignancy. So cancer and malignancy is controlled by the regulation and expression of these oncogenes, which interact with growth factor. This now enables us to have a totally new approach to the therapy and approach to malignancy and cancer. So AIDS, heart disease and stroke, and cancer are three major areas where we have had major impact over the past year alone, and in order to continue this at the direction and with the enthusiasm that we need, we need the NIH budget funded at that $7.45 billion level. We need the Heart, Lung, Blood Institute at the $1.1 billion level, and we need support for the blood resources program in the Heart, Lung, and Blood Institute.

Thank you, Senator.

PREPARED STATEMENT

Senator WEICKER. Thank you. We will place your statement in the record at this point.

[The statement follows:]

STATEMENT OF ALAN SCHREIBER

On behalf of the American Society of Hematology and its more than 3,000 members, I wish to thank you for the opportunity to present testimony before the Subcommittee again this year in connection with the legislation for the fiscal 1988 appropriations for the National Institutes of Health.

I am here today representing the American Society of Hematology. This Society is the only national organization of hematologists and is made up of physicians and biomedical scientists who are concerned with research, patient care and teaching as they relate to blood and diseases which affect the blood.

Before presenting our views about this legislation, I would like to express my deep gratitude to the members of this Committee and to the entire Congress for their very strong support last year on behalf of biomedical research and hematology. We greatly appreciate your long-standing commitment to the programs of the National Institutes of Health. We are particularly pleased with the strong support given by the Congress to investigator-oriented research. The creative imagination of our nation's scientists represents one of our country's greatest natural resources. The support that you have directed to these scientists provides the raw materials upon which their ideas will flourish. The resulting benefits are enormous and important to each and everyone of us.

The fluid and cellular constituents of blood are critical to maintaining many of life's processess. Flowing as they do through every organ of our body, abnormalities of the blood affect many organ systems. It is natural, therefore, that blood research is supported by a number of institutes, particularly the National Heart, Lung and Blood Institute, the National Cancer Institute, and the National Institute of Diabetes, Digestive and Kidney Diseases. This spectrum of support has been most productive for hematology research and for the broad research mandates of the individual institutes, and we feel strongly that each of these institutes should continue to direct funds for the support of blood research.

Aids is a good example of a disease transmitted in blood that affects one of the important blood cells, the lymphocyte. The manifestations of AIDS are seen in the dysfunction of many organ systems. Rarely has scientific progress been so rapid as that which has led to our understanding of the biology of AIDS. Hematologists have been among the scientists leading the way in AIDS research. Scientists have identified and extensively characterized the offending agent in AIDS. They have determined the major blood cell which the AIDS virus infects, the mechanisms by which the AIDS virus infects these cells and the alteration in blood cell function caused by the AIDS virus. Scientists are now working towards identifying a means for arresting this process. The great progress in the understanding of AIDS made thus far is a credit to the organization of the NIH itself and to the strong partnership which exists between the NIH and the many scientists making up the biomedical research community. The vigorous support of individual investigator-oriented research should continue to supply new ideas and approaches leading to the control of this dreaded disorder.

In addition to the blood lymphocyte, the blood platelet is critical to the maintenance of normal body function. The adhesive qualities of blood platelets are involved in their interaction with the blood vessel wall and are important in thrombosis. Over the past year we have learned much in regard to the mechanisms involved in platelet adhesion in cerebrovascular disease leading to stroke and in cardiovascular disease leading to heart ailments. Stroke and heart disease are two of our major causes of death. Our understanding of the molecular events involved platelet-blood vessel wall interactions should help lead to therapies which will control these devastating diseases.

Studies of the blood platelet carried out by hematologists and other scientists have led to an important insight into our understanding of normal and aberrant cell growth. Scientists have discovered that a substance released by the platelet, called platelet derived growth factor, has important effects in regulating normal cell growth and proliferation. This work will significantly influence our understanding of the regulation of blood vessel wall proliferation normally and in heart disease and other blood vessel and circulatory disorders.

Learning about how platelet derived growth factor and other similar growth factors work, has led to the identification of certain pathways that control cellular proliferation. A major new concept has evolved from these observations, which is that there exists in normal cells certain genes, termed oncogenes, that are normally involved in the production of these growth factors. Scientists have now learned that oncogenes are very carefully regulated in cells. The advances being made in understanding the regulation of these genes has made a major impact in our understanding of cancer and the biologic processes involved in the development of malignancy. Scientists have now determined that changes in the structure of these oncogenes or changes in the control of their expression can lead to malignant transformation and the development of cancer and leukemia. It is now believed that these oncogenes are probably critically important in the initiation and subsequent behavior of most human malignant tumors. Our continued understanding of growth factors and oncogenes and the mechanisms of their control, no doubt, will have a significant effect in our ability to control cancer.

Our understanding of the molecular control of cell growth coupled with other recent advances in molecular biology have paid major dividends in our ability to control anemia in several disorders. Thirty years ago scientists dicovered a human hormone, erythropoietin. Erythropoietin is a growth factor produced by the kidneys which stimulates the production of red blood cells in the bone marrow where they are normally produced. The natural production of erythropoietin is curtailed in kidney disease and several other disorders. About 85,000 Americans suffer from kidney failure and the accompanying decrease in red blood cells or anemia. Hematologists, using new concepts in molecular biology, this past year developed a method to manufacture this human hormone and to administer it to anemic patients with kidney disease. Virtually all patients thus far treated with erythropoietin have had a substantial improvement in their red blood cell counts. This diminution in their anemia has decreased these patients' need for blood cell transfusions and has dramatically improved their quality of life.

These are a few of some of the important advances in hematology research. There is currently an unprecedented explosion of new knowledge in biomedical research. Increasingly difficult new questions are being approached with new molecular technology. This is a costly process. It is costly in dollars, and is costly in personal commitment. The new knowledge acquired not only forms the basis for future biomedical discovery, it provides the foundation for new biomedical research industries which are creating jobs for many of our citizens and breathing new life into many of our heretofore ageing cities. Our nation's investment in biomedical research has become not only an investment in the future health of our loved ones, it has become an investment in the health of our economy. The investment has been in basic, investigator-initiated, non-directed, creative research. It is to this research that the energies of the NIH must be directed. The current success of this research and its promise of future successes are strong imperatives for support of NIH research at a level of no less than $7.45 billion for fiscal year 1988.

I hope that we have succeeded in explaining to you some of the important areas of ongoing research in hematology today. All of us have been affected one way or the other by the spectrum of these terrifying diseases. As we talk about science and dollars, let us not lose sight of our goal- which is to minimize pain and suffering and maximize the sense of health and well being in our nation, to the extent that we are able.

The American Society of Hematology makes the following recommendations, and expresses concerns as follows:

1. That appropriations for FY 1988 for the National Heart, Lung and Blood Institute, and the National Institute of Diabetes and Digestive and Kidney Diseases be funded at the suggested levels indicated below.

   NHLBI: $1.146 billion

   NIDDK: $596 million

   Our goal is for 40% of overall NIH approved investigator-initiated research grants to be funded.
2. That blood transfusion centers, called for in the appropriation bill report language last year, be funded in FY 1988 at the peer review recommended level. This is particularly important because of the AIDS public health threat. The Society is concerned that there is an increasing shortage of blood because of AIDS and increased organ transplants. We recommend support for the NHLBI public education program in this area.
3. That additional AIDS funding be an add-on, and not taken from on-going research programs. It is important for the NHLBI and NIDDK budgets be maintained at the above suggested levels.
4. In the context of recommending support for the NIH budget for FY 1988 at the $7.45 billion level, the Society recommends that the NCI be supported at the recommended level by the National Coalition for Cancer Research of $1.7 billion.
5. We suggest that the Committee take note in its deliberations of the 40th anniversary of the National Heart, Lung and Blood Institute and the extensive contributions to biomedical research sponsored by NHLBI over these 40 years.

Senator WEICKER. Dr. Schreiber, thank you very much.

Let me ask a question which is addressed to you but it is also addressed to all the rest of your colleagues in this room and those that are not here.

Why, over the past several years has the medical profession not really gotten into a public uproar over what has been attempted on our national budgets for health and science? I have said it many times—whether the teaching profession or whether the medical profession, whether scientists and research—all of you have such credibility with the American public. You come here, you speak to this committee. This is a small room, as you can tell. There is nobody from the press here. It is not a big issue. Why have you not stood up, in other words, as a profession to really alert the American people to this matter of what their priorities should be?

Dr. SCHREIBER. That is an important question. We scientists have sort of stayed in our laboratories, stayed taking care of patients, and concentrated on making scientific progress and not gotten involved in the political process. We have assumed our colleagues—by our colleagues I mean our public supporters—would recognize that progress is being made and would therefore continue to support us at the appropriate level.

I think that worked very well in the fifties, but as the budget dollar has gotten much more difficult to compete for, I think we need to do what you suggest, which we are only starting now with people like myself appearing here to let you know how important this is, to let you know that this is as important as any plight that our society faces, and as you commented last year at our similar testimony, Senator, that we need a war on disease, much as we make other wars. And I think that we need to raise the public consciousness to the importance of health research.

Senator WEICKER. I see all these right wing groups, they do television ads, newspaper ads on why the defense budget ought to be high and why we ought to be sending money to Nicaragua. You know, I see all this volunteer effort on behalf of the business of death. But in terms of a broad outreach for the American people, nothing would be, I think, more telling than the various disciplines in this area explaining in institutional advertisements what is involved here for this Nation.

Dr. SCHREIBER. Maybe this year—the month of May we are celebrating the centennial of the National Cancer Institute. It is a good time to let the country know of the enormous progress in malignancies. It is the 40th anniversary of the National Heart, Lung, and Blood Institute. Perhaps on this occasion it is a time to let everybody know what has been accomplished and what lies ahead, because as you know, we face some very, very significant challenges ahead.

Senator WEICKER. We are celebrating the centennial of the National Institutes of Health. The National Institutes of Health are very proud about the fact that they have shows running on public television, on PBS. Nobody is a bigger supporter of PBS than I am. But believe me, that is not the audience you want to reach. It might be great for "Sesame Street," but as far as what has been accomplished and what can be accomplished, they ought to be on the commercial networks telling people the NIH story and the story of all of its Institutes.

That is a good analogy, I think, to what all of you have to do. You can take rightful pride in what it is that you have accomplished. You probably feel you do not owe any explanation, but as you say, we are in a battle for money around this place. And I would like to take the story that all of you know about and tell it to the American people, translate and extrapolate it into what hope there is in the future. Believe me, that takes a little doing on your part. I can do the best I can both in this committee and on the floor of the Senate. In fact, I am about ready to go down to the floor on the budget, and I will get a few hundred million more for science. But I think it is a tragedy that you and I and others look upon level funding as being a victory, and that is what we have been doing for the last several years. We are glad to get out, in other words, with our scalps on our heads, and we do not want any more than that. That is not what it should be. This is where the growth in spending should take place. Yet we are satisfied with the scraps that are left over from the defense budget.

Dr. SCHREIBER. I appreciate your comments, of course. Our resources are so limited, we direct them into scientific investigation rather than to paying for immediate time, but you know, certainly we stand by you at any time that——

Senator WEICKER. I agree with you. Maybe it is associations and limited resources, but I suspect there is a more basic reason, and I will be glad to state it publicly. I suspect that the heavy proportion of your colleagues in the medical profession are all rather conservative types, and they do not want to go ahead and speak out against their President and his budget. That is just an instinct of mine. [Laughter.]

Senator WEICKER. But they ought to speak out, because we all have the right to engage in whatever politics we want to in this country. There is a special trust on the medical profession, because you know things that the American people do not know, and when those matters are being violated or pushed back to the point where the future is in jeopardy, then I think the greater obligation is to speak out with that knowledge which you specially have. This is not a criticism. I am just using you, in other words, to reach everybody else.

Dr. SCHREIBER. I appreciate that, but I represent our 3,000 or more hematologists, and I can say to you honestly that there is virtually unanimity of opinion and enthusiasm in our community for moving our budget along to the levels that we are talking about at the $7.45 billion level for the NIH. We do not have much discrepancy over that. There is enthusiasm. There is concern about what is happening, and we really want to move that apart, so I think that if there was conservatism in our establishment in the past it is now changing, and there is enthusiasm as represented by at least what you see here, this kind of testimony for moving out and speaking out at least at this level. Our resources are limited to prevent us at other levels to some extent, but we are happy to hear the suggestions, and we will try to direct some attention to that.

Senator WEICKER. Well, as I said, I am just using this as an occasion really for a dialog. I can see that you are a highly articulate individual and, obviously, the comments are not in any way directed against either your society or you individually. Rather they are to everybody in the scientific, educational, and medical community. We have already taken too much time, and I thank you very much.

Dr. SCHREIBER. Thank you.

STATEMENT OF LEON W. HOYER, M.D, NATIONAL HEMOPHILIA FOUNDATION

Senator WEICKER. Dr. Leon Hoyer, National Hemophilia Foundation.

Dr. HOYER. Senator Weicker, I am Dr. Leon Hoyer. I am responsible for biomedical research for the American Red Cross, but I am speaking to you today as a representative of the National Hemophilia Foundation.

The written testimony provides the data on specific funding issues, and I would like to emphasize in these few minutes some critical points about the relationships of patients with hemophilia, the medical community, and the Federal Government.

I will simply present a dilemma. It is a problem of a young man with severe hemophilia whom I first saw at the Newington Children's Hospital in 1970 when he was 10 years old. He had frequent bleeding episodes, and he was then limited to a wheelchair. He was hospitalized several months each year, and he was falling behind in schoolwork. Fortunately for that young man and for the 10,000 other severe hemophiliacs, concentrates prepared from human plasma became available to treat him, and his bleeding episodes came under control.

These concentrates were the products of years of research supported by the NHLBI. At the time he improved he shifted from a wheelchair to canes to walking unassisted. He has attended a federally funded comprehensive treatment center since 1978 where he regularly meets with orthopedic surgeons, physical therapists, dentists, a social worker, and a nurse. He has learned to administer factorate to himself at home or on the job, because he has a regular responsible position in a State agency.

Four years ago things changed, but this time it was in a very different way. All of us became aware that hemophiliacs were developing AIDS. It is now known that over 90 percent of severe hemophiliacs have been exposed to the AIDS virus. The virus had been present in the coagulation factor concentrates that had been so important to them. What is the future for this young man? No one knows, though it is a tragic fact that 2 percent, 1 out of every 45 severe hemophiliacs, has died of AIDS. We also know that unless risk reduction measures are taken, these men will transmit the virus to their wives and their pregnancies will have a significant possibility of transmitting AIDS to their offspring.

And so, 17 years later there has been remarkable progress and a sad reversal. What needs to be done? The National Hemophilia Foundation urges this subcommittee to support and to champion urgently needed appropriations, increased support for the hemophilia treatment center program, an emergency appropriation to the Centers for Disease Control [CDC] to expand risk reduction, education, and training programs to assist hemophiliacs in coping with the ever-present threat and to help them avoid transmitting the AIDS virus to their sexual partners, and increased support to the NIH and the CDC so that they can continue and expand the critical research directed toward the development and testing of nontoxic drugs that can be used to eliminate the AIDS virus from infected individuals.

PREPARED STATEMENT

In conclusion, I would emphasize our thanks for your support over the years, and urge you to find us even more support, for the problem is even greater.

Thank you.

[The statement follows:]

STATEMENT OF LEON W. HOYER

I am Leon W. Hoyer, MD. I am Associate Vice President of Biomedical Research and Development for the American Red Cross and I am speaking to you today as a representative of The National Hemophilia Foundation (NHF).

Let me begin by telling you of the many advances in hemophilia treatment made possible by your past support and end with a representation of our current needs.

Last year, at the 10-year anniversary of federal support for the comprehensive hemophilia treatment center program (HTC), NHF presented a symbolic "check" for $1.9 billion to Congress. This represented the return on the federal investment of $3 million annually. Federal support of comprehensive care, coupled with availability of plasma clotting factor concentrates, has made home infusion therapy possible, freeing patients from a life of hospital care and emergency room visits.

COMPREHENSIVE CENTERS - In 1976, the first year of Congressional support for the Comprehensive Hemophilia Diagnosis and Treatment Center Program, federal funding was provided to support the development of 24 comprehensive HTCs and 60 affiliates. Under the leadership of Dr. Merle McPherson of the Division of Maternal and Child Health (DMCH), the network of centers has expanded and now includes a strong regional structure. Over 9,500 persons with hemophilia (nearly 50% of the total hemophilia population) are now served by these centers, which provide multidisciplinary services including psychosocial, financial and vocational counselling, in addition to medical, dental and orthopedic care. The impact of these programs has been dramatic (see attached table).

As demonstrated by the table, Congress' investment in comprehensive care programs which promote home infusion therapy has paid off by reducing disability, unemployment and the cost of medical care for patients with hemophilia.

THE FUTURE OF HEMOPHILIA TREATMENT CENTERS - In 1981, HTC funding was included in the 15% set-aside for MCH funding. At that time, federal support of HTCs was $3.3 million. Last year, the funding was $3.5 million. The total funds available to centers in 1988 will be an increase of less than 6% over the amount received six years ago. This increase barely helped to maintain established services, and there are still 25 states that are not entirely covered by the regional federal treatment center network. In these areas, care remains fragmented as thousands of persons with hemophilia remain deprived of the benefit of state-of-the-art treatment.

AIDS: A SERIOUS PROBLEM THAT MAKES THE COMPREHENSIVE TREATMENT CENTERS EVEN MORE ESSENTIAL - Since I addressed you last year, the number of AIDS cases reported among children and adults with hemophilia has nearly doubled, to 303. The recognition that AIDS was transmitted through blood products has had a profound effect on families affected by hemophilia. It is a stinging irony that these blood products, which have provided people with hemophilia with a newly found freedom from pain and disability, have been identified as the source of their vulnerability to AIDS. This crisis has created a need for comprehensive care that is greater than ever before.

nese centers, particularly with respect to the psychosocial care being provided, have served as anchors of support during this critical period - without them, there surely would have been widespread panic. But now, the need for risk reduction and psychosocial services is increasing more than ever before and will continue to do so because of the profound impact of current data:

- one in every 67 individuals with hemophilia has contracted AIDS and, for those with severe hemophilia, the rate is one in 45 (when I testified before this committee in 1985, the rate was one in every 270);
- over 90% of persons with severe hemophilia have been exposed to HIV;
- two wives of men with hemophilia have contracted AIDS;
- it is estimated that, unless preventive measures are utilized, 1 to 5% of sexual partners of people with hemophilia will convert to HIV positive status each year;
- an increased number of AIDS cases have been reported in patients with mild and moderate hemophilia.

It has now reached the point where it is important to recommend risk reduction measures for intimate relations. In order to reduce the transmission of AIDS in the hemophilia community, it is important that accurate information be disseminated rapidly through education and counselling. These objectives are now being addressed by the treatment centers you created 11 years ago.

PROGRESS IN REDUCING THE RISK OF AIDS AMONG PEOPLE WITH HEMOPHILIA - As a result of enormous collaborative efforts between the public and private sectors, there has been substantial progress in reducing the risk of AIDS among patients and families affected by hemophilia. Blood donations are tested and blood products used by people with hemophilia are heat treated. Based on these advances, blood products used for treatment of hemophilia are now virtually free of HIV contamination.

Concern remains, however, about the potential that the large percentage of people with hemophilia who are antibody positive have for transmitting HIV to their sexual partners. Concern exists regarding the importance of people with hemophilia maintaining their treatment of bleeding episodes when medically indicated, despite their fear of AIDS. Special attention is also needed to address AIDS-related stress among patients and families. But, most important of all, concern persists as to how many of the 90% of the people with severe hemophilia who are HIV positive will succumb to AIDS.

APPROPRIATIONS REQUEST - The issues that I have addressed can be translated into the following requests for appropriations:

1. FY88 Appropriations for Treatment Centers - We urge you to appropriate $4.9 million for FY88 to support the HTC Program. This $1.4 million increase is essential to expand the existing regional network to areas and patients not currently served (about 50% of the total). To assure the continuation of these programs, we request that you retain the 15% level for a set-aside within the DMCH appropriations, because it is more efficient to distribute resources for certain disorders on a regional and national basis, rather than through block grants through states. The HTC Program is clearly a special program of regional and national significance and is a model for other chronic diseases. We also urge that MCH, of which the hemophilia program is a part, be funded at the full authorization level, as this is an investment in our nation's future. And lastly, we urge strongly that funds for pediatric-related AIDS initiatives be provided through

HRSA in view of the growing number of AIDS cases among children. This support will help advance programs already initiated by MCH to address these concerns.

2. Emergency Appropriations for Risk Reduction, Education and Training - Now that the blood supply is no longer considered a source of HIV transmission to the hemophilia community, the major concern is the potential risks associated with sexual and perinatal transmission of HIV. The hemophilia community represents a model for heterosexual transmission, as its population is amenable to surveillance and is relatively self-contained and stable, with the highly regionalized services that are concentrated in the federally supported HTCs. To effectively reduce the risk of heterosexual transmission of HIV, it is important that health education and behavioral changes in the hemophilia community be well understood and documented. These efforts among people with hemophilia will be of benefit to all in combatting AIDS.

AIDS has caused considerable fear and confusion among patients, health professionals and the general public. The potential of heterosexual and perinatal transmission has had a profound psychosocial effect upon individuals and entire families. In some instances, due to the fear of AIDS, patients have withheld treatment when medically indicated. What a tragedy it would be if the fear of AIDS were to catapult us back two decades, to the era of substantially increased bleeding causing deaths and severe joint damage. In the coming year, we will be receiving $3.5 million to assist us in addressing these risk reduction, psychosocial, education, and training needs. We are most grateful for your support in providing these funds and applaud the creative and effective manner in which CDC and DMCH followed your committee's directive in cooperatively distributing them to the existing regionalized network of HTCs.

Over the past year, the number of AIDS cases among persons with hemophilia has nearly doubled. Your support has helped us cope with this problem, but it has also enabled us to learn how difficult are the problems of coping with AIDS in the hemophilia community. The expanded needs for effective risk-reduction strategies demand focussed attention; thus, we are requesting an expanded appropriation in the amount of $7 million to the Centers for Disease Control.

On February 22-23, at a CDC- convened conference in Atlanta, mandatory HIV testing was rejected and, it was reported, most conferees agreed that any expanded voluntary testing initiative should be accompanied by strict protection of confidentiality and substantial pre- and post-test counselling support. Last week, NHF issued a statement that "it may now be appropriate to institute HIV antibody testing" in persons with hemophilia on a voluntary basis. In the same statement, NHF emphasized that confidentiality must be preserved and that pre- and post-test counselling "must be readily accessible." If we are to succeed as a model for expanded testing, there must be funding support adequate to the task.

3. Research - The success of comprehensive care and home infusion therapy might suggest that the "hemophilia problem" has been solved. Nothing could be further from the truth. Hemophilia is still an extremely painful and disabling disease. Clotting factor can effectively control bleeding but it is not a cure. And the AIDS tragedy has re-emphasized that, as long as people with hemophilia depend upon a factor derived from human blood plasma, they will be vulnerable to

anything that may contaminate blood products. In addition, clotting factor inhibitors develop in over 10% of hemophilic patients and these antibodies seriously compromise subsequent care. For these reasons, we are vitally concerned that there be adequate funding for basic biomedical research provided by the NIH, and especially the blood diseases and resources research program of NHLBI and the important research conducted by NIADDK and NIAMS.

We are most appreciative of the NHLBI for convening a conference on "Blood Transmitted Diseases in Persons with Hemophilia:Defining the Research Agenda" last summer. Out of this meeting emerged a clearly defined list of pressing research priorities,to be addressed well into the next decade by the country's most eminent medical and scientific authorities. This research will be of enormous benefit far beyond the hemophilia community, but funding is critical. We are also grateful for Congressional support for increased AIDS-related research. Continued and increased funding is needed in this area.

The NIH must receive funding to support a multifaceted research effort that will lead to a better understanding, control, and widespread distribution of experimental drugs. Thanks to your support and the cooperation of NIAID, major investigational efforts are now moving forward for the use of experimental drugs for the hemophilia patient. The Centers for Disease Control need increased funding so that they can expand their excellent laboratory investigations and epidemiologic studies. We seek $3 million for CDC to carry out a longitudinal study to monitor the health status of persons with hemophilia. This effort, conducted through the HTC network, would not only help the hemophilia community but provide valuable data on the natural history of HIV. The FDA also needs support to expand their surveillance of the safety of blood products.

The new National Institute of Arthritis, Musculoskeletal and Skin Diseases (NIAMS) represents a new hope for people with hemophilia, many of whom suffer severe joint damage as a result of recurrent bleeding. Attached is a statement by Marvin S. Gilbert, M.D., Associate Clinical Professor of Orthopedics, Mount Sinai School of Medicine, NY, which outlines the unique research potential represented by the hemophilic joint.

And lastly, we urge that you support the proposal for NHLBI to conduct a nationwide effort to encourage blood donation as an important national resource. This is especially urgent in light of the unfounded fears caused by AIDS, which have wrongly deterred some potential donors.

SUMMARY - Over the last 11 years we have been most pleased with the support you have provided for hemophilia research and treatment. We are now faced with very serious and difficult problems as a result of AIDS, and therefore are asking you to help us find more support for comprehensive care, research and the unique problems faced by the hemophilia community.

Although hemophilia is primarily a disorder of the blood clotting mechanism, it is not exsanguination (loss of blood) that poses the real threat to the hemophiliac's normal and productive existence. Medical care can most always be made available for such life-threatening emergencies. It is the less dramatic, but recurrent bleeding into the joints (causing hemophilic arthropathy) that insidiously renders the hemophiliac crippled so that he is unable to function normally, making him a burden rather than a contributor to society. It is for this reason that I request that the new National Institute of Arthritis, Musculoskeletal and Skin Diseases support research into the causes, care, and cure of this particular form of arthritis. Hemophilia is a genetically transmitted blood disorder that afflicts over 20,000 Americans. Control of this disease, by replacement of the missing clotting factor, has largely eliminated the fear of death from hemorrhage. However, hemophilic arthropathy has not been eliminated nor controlled. Ninety-three percent of bleeding episodes, in hemophiliacs, occur into the musculoskeletal system, the vast majority occurring in the major joints. It is not unfair to say that every severe hemophiliac will bleed into a joint and it is rare for him to avoid the pain, stiffness and weakness of arthritis. The articulations most commonly affected are the knees, ankles, and elbows. Loss of function of these joints is the most common cause of permanent disability in the hemophiliac.

The association between bleeding disorders and arthritis was known for centuries, but it was not until 1892 that it was shown that bleeding into the joint caused this severe arthritis. In 1952, in this country, it was demonstrated that the bleeding started in the synovium or joint lining and that the blood itself had a deleterious effect upon the cartilage. The blood within the joint would cause further swelling and inflammation which would predispose to further bleeding. This vicious cycle begins at about age 5 and completes most of its destruction before the teen-age years have passed.

In the past, research into this problem was hampered by the paucity of surgical and pathologic material available for observation, because until concentrates of the missing clotting factors were made available, surgery was avoided and fraught with complications. Surgical procedures on arthritic complications are now a reality and the specimens obtained at these procedures will provide clues into the causes of the destructive process. It is to be hoped that basic understanding of the pathology will lead to prevention, not correction. Questions that remain to be answered include:

- Why is the synovium such a common site of bleeding?
- Why does the blood within the joint cause such rapid destruction of the cartilage?
- Does iron from the blood cause the cartilage degradation or are enzymes liberated during the synovitis the basic cause?

Research into these problem areas will also be beneficial in classifying the causes of joint destruction in other arthritices, such as rheumatoid arthritis and hemochromatosis.

Orthopedics is that specialty that deals with disorders of the musculoskeletal system. The word is derived from the Greek (ortho = straight and pedia = child), literally "to straighten the child". It is in hemophilia that this challenge is most severely tested.

To straighten limbs, large, complicated and costly casts must be applied. To strengthen weak muscles and overcome stiffness, long, intensive and painful courses of physical therapy must be started. To correct damaged joints, risky surgical procedures must be undertaken. To support the joint damaged beyond repair, heavy, bulky braces must be applied.

In the long run, this becomes more expensive than prevention. For these reasons, research into hemophilic arthropathy must be specifically supported by the new National Institute of Arthritis, Musculoskeletal and Skin Diseases. It is a chance to "straighten the child" before he is bent.

OUTCOME DATA FROM 31 DMCH FUNDED COMPREHENSIVE HEMOPHILIA CENTERS AND THEIR AFFILIATES

Outcome Data	Year Before Program (1975)	Tenth Year of Program (1985)	Percent Increased Percent Decreased (−)
No. patients seen at primary centers	1,783	5,606	+214%
No. patients seen at affiliate centers	329	1,641	+399%
No. patients receiving regular comprehensive care	1,333	5,683	+326%
No. patients on self-infusion ("home care")	514	2,517	+390%
Average days/year lost from work or school	14.5	3.9	−73%
Average hospital admission/year	1.9	0.22	−88%
Average days/year spent as inpatient	9.4	1.6	−83%
Percent patients with third party coverage	74	93	+26%
Out-of-pocket expense/ patient/year	$ 1,700*	$ 396.	−77%
Overall costs of care/ patient/year	$31,600*	$8,127.	−74%
Percent unemployed adults	36	9.4	−74%

*adjusted for 1985 dollars

HEMOPHILIA TREATMENT AND RESEARCH

- $4.9 MILLION FOR FY88 TO SUPPORT HEMOPHILIA TREATMENT CENTERS PROGRAM ($1.4 MILLION NEW FUNDING
  - MAINTAIN COMPREHENSIVE CARE PROGRAMS
  - ENHANCE REGIONALIZATION
- RETAIN 15% SET-ASIDE FOR MCH AND APPROPRIATE FULL MCH AUTHORIZATION LEVEL
- SUPPORT BASIC BIOMEDICAL RESEARCH AT NIH (NHLBI, NIDDK, NIAMS)

I. HEMOPHILIA - WHAT IT IS

Hemophilia is a lifelong, hereditary blood clotting disorder which affects males almost exclusively. Because of the inactivity of a plasma protein in the blood, the blood of a person with hemophilia does not clot. Without adequate treatment, a person with hemophilia may experience uncontrolled, painful bleeding and/or chronic joint bleeding, resulting in progressive joint damage and crippling.

II. HEMOPHILIA TREATMENT CENTERS PROGRAM

A. Background - In 1976, the Congress first appropriated funds for comprehensive hemophilia diagnostic and treatment centers. Since then, support for this program was included in Maternal and Child Health (MCH) funding as part of the 15% set-aside within MCH appropriations. This was done because resources for hemophilia are more efficiently distributed on a regional and national basis and the hemophilia treatment center is a special program of regional and national significance.

B. Program Impact - Since 1976, the hemophilia treatment centers program has resulted in remarkable human and economic benefits. With comprehensive care, disability, unemployment and medical costs have been substantially reduced, thus enabling hemophilia patients to lead nearly normal and independent lives. (See Attachment A)

Total health care costs have been reduced by 74% - an annual savings of $223 million. These savings are realized only from those who are enrolled in federal treatment programs (about 50% of hemophilia patients).

III. BIOMEDICAL RESEARCH

Despite the success of comprehensive care, the "hemophilia problem" has not been solved. Because people with hemophilia depend upon a factor derived from human blood plasma, they are vulnerable to any diseases that may contaminate blood products (e.g., AIDS, hepatitis). More research and epidemiologic work needs to be done to reduce the spread of blood-borne diseases, which will benefit the general public as well. While this research is primarily conducted at the NIH (i.e., NHLBI, NIDDK), significant contributions are also derived from the important research conducted at CDC and FDA. The new NIAMS represents a new hope for the many people with hemophilia who suffer severe joint damage as a result of recurrent bleeding.

IV. IMPACT OF AIDS

AIDS AND HIV INFECTION

A. $7 MILLION FOR FY88 TO EXPAND SUPPORT FOR RISK REDUCTION EDUCATION AND TRAINING (CDC)

B. SUPPORT FOR RESEARCH AGENDA ON "BLOOD TRANSMITTED DISEASES IN PERSONS WITH HEMOPHILIA" (NHLBI)

C. FULL SUPPORT FOR EXPERIMENTAL AIDS TREATMENT AND RESEARCH (NIAID)

D. $3 MILLION FOR FY88 TO MONITOR HEALTH STATUS OF PEOPLE WITH HEMOPHILIA (CDC)

E. SUPPORT FOR LABORATORY AND EPIDEMIOLOGIC STUDIES (CDC)

F. FULL SUPPORT FOR SURVEILLANCE OF BLOOD PRODUCTS (FDA)

G. SUPPORT PROPOSAL TO ENCOURAGE BLOOD DONATIONS (NHLBI)

I. IMPACT OF AIDS

Since the early 1970's, the advances in hemophilia care have enabled people with hemophilia, for the first time in history, to lead nearly normal, full and productive lives. Now this population is faced with the frightening specter of AIDS and HIV infection. Because of the way in which their blood products are prepared, a person with severe hemophilia may be exposed to as many as 100,000 blood donors per year. Blood clotting factor, the source of their newly found freedom from pain and disability, has changed overnight from a life sustaining substance to a possible threat to their survival. The most recent data reveal:

- one in every 67 individuals with hemophilia has contracted AIDS (for those with severe hemophilia, the rate is one in 45);
- over 90% of persons with severe hemophilia have been exposed to HIV;
- two wives of men with hemophilia have contracted AIDS;
- it is estimated that unless preventive measures are utilized, 1 to 5% of sexual partners of people with hemophilia will convert to HIV positive status each year; and
- an increased number of cases have been reported in mild and moderate hemophilic patients.

Two years ago, the fear of AIDS was confined to the person with hemophilia. Now there is the threat of heterosexual and neonatal transmission of AIDS in families affected by hemophilia. It has now reached the point where it is important to recommend risk reduction measures to be considered in intimate relations. In order to reduce the transmission of AIDS in the hemophilia community, it is important that accurate informaiton be disseminated rapidly through training, education and counselling. It is equally important to dispel inaccurate information about AIDS, HIV infection and hemophilia.

II. PROGRESS IN REDUCING THE RISK OF AIDS AMONG PEOPLE WITH HEMOPHILIA

As a result of enormous collaborative efforts between the public and private sectors, there has been substantial progress in reducing the risk of AIDS among patients and families affected by hemophilia.

- education/screening of donors is universally applied among volunteer and commercial blood collection organizations;
- HIV antibody testing is now applied to all donated blood and plasma;
- HIV inactivation methods are now universally applied in the preparation of clotting factor concentrates; and
- DDAVP for persons with mild and moderate hemophilia and von Willebrand's disease is, in most instances, substituted as an alternative to human source plasma products.

In summary, it appears that the steps detailed above have led to Factor VIII and Factor IX products (or DDAVP) that are virtually free of HIV contamination.

Concern remains, however, about the large percentage of people with hemophilia who are HIV positive and the potential for the transmission of AIDS and/or HIV to their sexual partners. Concern also exists regarding the importance of people with hemophilia maintaining their treatment of bleeding episodes when medically indicated, despite their fear of AIDS. Special attention must also be given to AIDS-related stress that is experienced by patients and families and the importance of providing stress reducing support such as (a) a means of reinforcing the importance of certain behavior that will reduce risks; and (b) to assist them in coping with the AIDS risk environment.

While NHF has been successful in transferring knowledge to hemophilia providers, patients and families, it is of critical importance to maintain/expand the flow of information and to develop methods to maximize the use of this knowledge to bring about behavior change that will reduce risks. Towards this end, NHF issued a statement last week that "it may now be appropriate to institute HIV antibody testing" in persons with hemophilia on a voluntary basis. In the same statement, NHF emphasized that confidentiality must be preserved and that pre- and post-test counselling "must be readily accessible." If we are to succeed as a model for expanded testing, there must be funding support adequate to the task.

III. PROBLEM STATEMENT: DEFINITION OF NEEDS

(Referenced to "Appropriations Needs" above.)

A. Need to reduce the risk of heterosexual and perinatal transmission of AIDS and HIV infection; need to transfer updated knowledge related to risk reduction and treatment to providers and patients; and need to develop methods to reinforce behavior changes in coping with existing and emerging information, while at the same time reinforcing the importance of maintaining treatment for bleeding episodes.

B. Need to expand research for blood transmitted diseases.

C. Need to support experimental AIDS treatment and research.

D. Need to support longitudinal study of health status of persons with hemophilia.

E. Need to support laboratory and epidemiologic studies.

F. Need to support surveillance of existing and expeditious review and approval of new blood products.

G. Need to dispel unfounded AIDS-related public fears about blood donation.

Senator **Weicker**. Thank you, Dr. Hoyer. Let me ask you a question. Where do things sit now as far as the hemophiliacs are concerned? Can they be assured that the blood they are getting is free from AIDS at this juncture?

Dr. **Hoyer**. I believe they can, for two reasons. First of all, all of the blood plasma that is used to make the concentrates is tested for the AIDS virus. Second, all of the concentrates are then treated to eliminate any virus that might have slipped through. We do not have any evidence of conversion to the AIDS virus since these two measures have been introduced.

Senator **Weicker**. And that would have been since when?

Dr. **Hoyer**. 1985, late 1985.

Senator **Weicker**. And have you tried to track as best as possible those who might have been subjected to the virus through transfusions prior to that time?

Dr. **Hoyer**. Yes, indeed. Every hemophilia treatment center offers to the patients testing for the AIDS virus. In fact, the Hemophilia Foundation recently announced as a policy decision the support for voluntary testing by all hemophilia patients and their families to be sure that they are aware of the situation so that they can take the appropriate measures.

Senator **Weicker**. Thank you very much.

Dr. **Hoyer**. Thank you.

STATEMENT OF RALPH CAZZETTA, COOLEY'S ANEMIA FOUNDATION, INC.

ACCOMPANIED BY CHRIS TSANGARIS

Senator **Weicker**. Vivian Giordano and Ralph Cazzetta of Cooley's Anemia Foundation.

Mr. **Cazzetta**. Senator Weicker, first of all, Vivian Giordano could not make it today. She is recuperating from an operation. With me is Chris Tsangaris, a fellow patient. At this time I would like to thank you for your support for Cooley's anemia in the past that you have given us, and I know you will support us in the future with the fight against thalassemia.

I am Ralph Cazzetta, and with me is Chris Tsangaris. Both of us are members of the Thalassemia Action Group which we have established for thalassemia patients who are 13 years and older. I am also a member of the legislative committee of the board of directors of the Cooley's Anemia Foundation.

Both Chris and myself are in our mid-twenties, and are both victims of Cooley's anemia. We would like to recall to you what Cooley's anemia is exactly. It is a fatal blood disease that is passed from parent to child, normally striking children of Mediterranean-American parents, including those of Italian and Greek descent as well as Syrian, Israeli, and other populations. We are increasingly seeing the disease manifest itself in those recent immigrants from Asia.

At this time I would like to turn to the fact sheet of the appropriation hearings of 1987. The Cooley's Anemia Foundation has the following suggestions for appropriations for research and patient care in regard to Cooley's anemia. In the Maternal and Child Health Administration we recommend a 15-percent increase in appropriation levels for that agency, and as 15 percent of that would be utilized in the set-aside programs of regional and national significance, we feel that patients with Cooley's anemia and their families would be well served, and we are hopeful that some of the increase would be used for expansion of programs to other patients with Cooley's anemia across the country.

In regard to National Heart, Lung, and Blood Institute, we recommend a level of $1.146 billion, which is the professional judgment budget which all organizations which support the Heart, Lung, and Blood Institute, we understand, also support.

In regard to the National Institute of Diabetes, and Digestive and Kidney Diseases, we support the figure of $607,595,000, which is a 19-percent increase over fiscal year 1987, and which is the level of support that the professional and lay organizations who have formed a coalition in support of this Institute also support.

We are beginning to be deeply concerned about the AIDS matter because all of the patients with Cooley's anemia are heavily dependent upon blood transfusions. Therefore, we are concerned that the funding for AIDS research be increased heavily, but not at the expense of other research programs.

We also urge that considerable consideration be given to work that might be undertaken in terms of educating the American public on the need of blood transfusions, but also the protection of the blood supply in the United States. We support the ad hoc group, the medical research funding requested level of $7.690 billion for the National Institute of Heath overall.

PREPARED STATEMENT

Senator Weicker and members, at this time I would like to thank you on behalf of Chris and myself for the support that you have given us in the past and we hope to receive in the future.

[The statement follows:]

STATEMENT OF VIVIAN GIORDANO

Mr. Chairman, this is the tenth year that representatives of the Cooley's Anemia Foundation have appeared before you, and we are very pleased to report on a decade of advance as a result of the funding, which this Committee has provided, of various programs in the National Institutes of Health and the Maternal and Child Health Administration.

I am Vivian Giordano, and with me is Ralph Cazzetta; both of us are members of the Thalassemia Action Group, which we have established for thalassemia patients who are 13 years old and older. I am also a member of the Legislative Committee of the Board of Directors of the Cooley's Anemia Foundation. It will be useful for you to have some background about the Cooley's Anemia Foundation and about the disease.

We would like to recall for you what Cooley's Anemia is, exactly. It is a fatal blood disease that is passed from parent to child, normally striking children of Mediterranean-American parents, including those of Italian and Greek descent, as well as Syrian, Israeli, and other population groups (we are increasingly seeing the disease manifest itself in those recent immigrants from Asia). First let me comment on the remarkable support this Committee has given to the study of Cooley's Anemia and care for the patients with Cooley's Anemia.

As you may recall, and as you have supported over the last several years in bill report language, two programs currently exist which provide for demonstration and care programs for children with Cooley's Anemia. Both programs are funded from the 15% set-aside for programs of regional and national significance, in the Maternal and Child Health Administration. We would like to compliment, at this point, the Maternal and Child Health Administration and the excellence of its support for our programs. They have shown themselves at every stage to be deeply concerned about the disease, about the patients, and about the families. Over the years they have provided a number of pieces of written information about Cooley's Anemia, including most recently a psychosocial directory of services, which has been widely distributed and used by the Foundation. At this point, however, we would like to make the point that for the years since fiscal year 1985, these programs have been essentially level funded, even though inflation has increased and the number of Cooley's Anemia patients have also increased (because of improved education of physicians on the Cooley's Anemia symptoms, more and more children who might not have been diagnosed with Cooley's Anemia are now being diagnosed and sent to hematologists and to medical centers for more appropriate care). Thus, this level funding has in fact caused a significant reduction in services provided.

These two programs, in New England (Boston) and in New York State are not sufficient to cover the entire group of Cooley's Anemia patients nationwide, of course. For example, we do know that a large pool of patients, who are underserved, currently exist in places such as Philadelphia. At some point we are hopeful that these patients can also be served in the same excellent way that they are served in the New York State and New England programs--of course, this cannot take place with the kind of level funding that has existed recently. We also note that all of the Maternal and Child Health block grant has remained stable since the FY '85 appropriation, at $478 million. We support the request being made by all of the organizations now being served by the Maternal and Child Health Administration that this funding be increased.

Additionally, there are two agencies of the National Institutes of Health which have been superbly supportive of research on Cooley's Anemia. Those two institutes are the National Heart, Lung and Blood Institute and the National Institute of Diabetes and Digestive and Kidney Diseases.

We would like to note that at our recent Annual Meeting, Dr. Claude Lenfant, Director of the NHLBI, was awarded our "Hourglass Award" for the excellent leadership that he has provided in the NHLBI for research in Cooley's Anemia. He appeared personally to give us an update on the programs under his jurisdiction, and we were delighted to have him come. We should also note that the NIDDK leadership has been absolutely extraordinary in its support. Several times in the past years the leadership of that institute has come to our national meetings and has been similarly received. We make particular note of the work of Dr. Gary Striker, Director of the Kidney, Urologic and Blood Diseases Division, and especially Dr. David Badman, Director of the Hematology Program there.

Mr. Chairman, as a result of the work of this Committee, each of these institutes is now providing approximately $6 million worth of research which either directly or indirectly impinges upon Cooley's Anemia research. We cannot speak too highly of their work, and of the kind of cooperation that we have received.

We thus have several recommendations to make, Mr. Chairman, and they are as follows:

1. For the Maternal and Child Health Administration, we recommend a 15% increase in the appropriation levels for that agency, and as 15% of that would be utilized in the set-aside for programs of regional and national significance, we feel that patients with Cooley's Anemia and their families would be well served, and we are hopeful that some of the increase would be used for expansion of programs to other patients with Cooley's Anemia across the country.

2. In regard to the National Heart, Lung and Blood Institute, we recommend that a level of $1.146 billion, which is the professional judgment budget which all organizations who support the Heart, Lung and Blood Institute (we understand), also support.

3. In regard to the National Institute of Diabetes and Digestive and Kidney Diseases, we support the figure of $607,595,000, which is a 19% increase over fiscal year 1987, and which is the level of support that the professional and lay organizations who have formed a coalition in support of this institute also support.

4. We are beginning to be deeply concerned about the AIDS matter, because all of the patients of Cooley's Anemia are heavily dependent upon blood transfusions. Therefore, we are concerned that the funding for AIDS research be increased heavily, but not at the expense of the other research programs.

5. We also urge that considerable consideration be given to the work that might be undertaken in terms of educating the American public to the need for blood transfusions, but also to the protection of the blood supply of the United States.

6. We support the Ad Hoc Group for Medical Research Funding requested level of $7.690 billion for the National Institutes of Health.

Now, Mr. Chairman, I should like to comment about a few of the advances that have been occurring in research on Cooley's Anemia in recent years.

An important finding this year was the discovery of a spontaneous mutation in mice that leads to a form of beta-thalassemia similar to that found in Cooley's Anemia patients. This appears to be an excellent model that will permit a broader range of basic and clinical study than has previously been possible.

Further study of Desferal therapy has resulted in promising new chemical modifications of Desferal. Studies continue to report that Desferal treatment will prevent or delay the onset of heart disease caused by iron overload, and recent data indicate that patients who regularly use the drug are living 13 years longer than before.

Another encouraging sign comes from a recent study that suggests a substantial reduction in new cases of Cooley's Anemia over the past 10 years in the

United States. This significant accomplishment is attributed to the success of education and prevention programs, and to widespread testing of trait-carrier prior to marraige, and appropriate counseling.

Bone marrow transplant research also holds promise for curing the disease. Research into the problems of graft rejection and graft-vs-host disease is continuing and recent progress is encouraging.

It is clear that through research we are making major progress toward a potential cure and a reduction in the incidence of the diseases. We ask that the support of these activities be continued and no reduction be made in the funding of these programs.

In addition to the advances being made through research, similar advances are being made by the Cooley's Anemia projects in New York and New England. Last year, the Maternal and Child Health Program awarded $424,000 to the two programs to support their screening, monitoring, counseling, education and treatment programs. We request that funding for the MCH program be continued at a level adequate to support the funding of these programs. We have attached a copy of the report, "Cooley's Anemia: A Psychosocial Directory" that was prepared under an MCH contract in response to direction from the Committee. We believe you will share our enthusiasm for the report. It brings together in a single document a description of the disease and its management, problems that Cooley's Anemia patients and their families face, and the types of help they need. It also lists state agencies, advocacy programs and self-help groups. The directory has been a real asset and we appreciate the Committee's effort to have it prepared and the effort that the MCH program and others put into its development.

In closing, we wish to thank the NHLBI and NIDDK at NIH, and the MCH program at HRSA for the outstanding work that they have done on behalf of Cooley's Anemia patients and their families, and to praise their continued support of all Cooley's Anemia programs in times of fiscal constraint.

Mr. Chairman and members of the Committee, words cannot express our gratitude for your support of Cooley's Anemia research and care programs over the last 10 years which have made such a difference to those of us with the disease.

Thank you.

We would be pleased to answer any questions you may have.

The Cooley's Anemia Foundation, Inc., has the following suggestions for appropriations for research and patient care in regard to Cooley's Anemia:

1. For the Maternal and Child Health Administration, we recommend a 15% increase in the appropriation levels for that agency, and as 15% of that would be utilized in the set-aside for programs of regional and national significance, we feel that patients with Cooley's Anemia and their families would be well served, and we are hopeful that some of the increase would be used for expansion of programs to other patients with Cooley's Anemia across the country.

2. In regard to the National Heart, Lung and Blood Institute, we recommend that a level of $1.146 billion, which is the professional judgment budget which all organizations which support the Heart, Lung and Blood Institute (we understand), also support.

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5. We also urge the considerable consideration be given to the work that might be undertaken in terms of educating the American public to the need for blood transfusions, but also to the protection of the blood supply of the United States.

6. We support the Ad Hoc Group for Medical Research Funding requested level of $7.690 billion for the National Institutes of Health overall.

The Foundation was begun by a group of volunteers whose families had been stricken by Cooley's Anemia, over 30 years ago. On September 20, 1954, the original core of volunteers officially incorporated the Cooley's Anemia Foundation in the State of New York as a national voluntary health agency, for the express purpose of coordinating national and regional research activities, educating and counseling the public at risk (an estimated 20 million carriers of the genetic disease known as Cooley's Anemia exist in the United States). The Foundation also provides patient care and family support services for those stricken with the disease, and also has established a professional education program to provide the medical profession with forums in which to objectively share information about the disease and treatment. The Foundation, using the National Institutes of Health peer review programs as a model, has developed a program of "seed money" grants to researchers who have promising ideas, so that they may organize their work, lay the groundwork, and prepare grant proposals to major research entities, such as the NIH, for the large funding amounts necessary to carry out their work. Such grant requests to the Foundation are reviewed by physicians in the field of hematology, who are known to be among the most qualified in the world to judge the worth of the proposals. Also, the Foundation awards fellowships to young researchers who show promise, and who have significant ideas for research in the field.

Senator WEICKER. Thank you very much, Ralph, for your very well presented testimony.

Chris, do you have anything that you would like to say at this juncture?

Mr. TSANGARIS. I would just like to thank you for giving us the opportunity to come down and hope we will receive help from you in the future as in the past. We are looking for a cure, and that is what we want.

Ralph mentioned that I am in my .twenties. That is wrong. That stands to be corrected. I am 30, going on 31. It was a rough 31 years, and I would like to see the younger kids get the cure, if not for myself, for the younger kids and for Ralph. Thank you.

Senator WEICKER. Thank you both very much. At around 11:30 I will be on the floor trying to get extra moneys in this budget for the Maternal and Child Health Care Program you mentioned, in addition to the AIDS research, in addition to the NIH research program. So really, for every one of the areas that you have touched upon I would hope to get increased funding in the budget.

Thank you both very much for making the effort to be with us, and as I said, for your very eloquent testimony. Thank you.

Mr. CAZZETTA. Thank you.

STATEMENT OF ROBERT DRESSING, PRESIDENT, CYSTIC FIBROSIS FOUNDATION

Senator WEICKER. Robert Dressing, president of the Cystic Fibrosis Foundation.

Mr. DRESSING. Good morning, Senator.

Senator WEICKER. Good morning.

Mr. DRESSING. I appreciate the opportunity to appear before you again. It is a great honor. There is no greater friend in this world to biomedical research than you, and we appreciate it greatly.

I will talk very quickly in my 3 minutes. I think it is a great idea. I think if you could encourage your colleagues in the Appropriations Committee for defense spending to limit their testimony to 3 minutes we might get to equity at some point.

In the meantime let me tell you about a success story that is going on that I think proves that the investment in biomedical research is not only a good one but it is one that can pay huge dividends.

We have been in this business for over 30 years. Tough struggle at the beginning because we were locked in an area of science for which there was not a great deal of interest, in genetics. We played the role of trying to complement what was happening at NIH by funding bright young postdocs in the early parts of their career, hoping that they would go on into a career of cystic fibrosis research. I think that paid off well for us, but it was going painfully slow and tragically slow.

Finally, in 1978 we were successful in getting a congressionally mandated committee report on the disease and the state of the art, and that report recommended that if we were going to move this disease off the dime and really be able to impact it, we were going to have to create comprehensive multidisciplinary research centers looking at this disease and trying to unravel it. That was the good news.

The bad news was, Congress said, we do not have money to do this. While we recommend that it be a course that you follow, if you choose to do it, you are going to have to do it with your own dollars. It was way beyond us, but we picked up the gauntlet and went out and raised $15 million in 4 years to fund 10 of these centers.

I can tell you today that that research that we have been able to redevelop as the result of the creation of those centers is literally unraveling this disease. You may have read this past week that the gene seems to be within our grasp. Once we have that we can begin to look in the cell to see how we can change the course of this disease not only in future generations but in the existing patient population of 30,000.

Now, that is remarkable. We seem to have $300 million every year that we can take care of this patient population, but to make the investments to eliminate the disease has always escaped us. It does not make any sense for us. We are for the first time asking that these programs that we have created, which are way beyond the Cystic Fibrosis Foundation today, be picked up by the Federal Government. It would cost $50 million to make that investment, but in the days of deficits that seem to be running rampant, it makes perfect sense to spend $5 million to save $300 million, plus the fact that we can give these children back the quality of life that they deserve, and they can become meaningful members of the community. I cannot think of a better investment in this world than to do that. It makes absolute sense.

PREPARED STATEMENT

We know that we can depend on you to carry that message. You have done it so eloquently. We are grateful for what you have done for us. Thank you.

[The statement follows:]

STATEMENT OF ROBERT DRESING

My name is Robert Dresing, and I come before you as president of the Cystic Fibrosis Foundation, but more importantly, as the parent of a son with cystic fibrosis (CF), the most common, fatal genetic disease in the United States.

Thirty years ago, my son would not have reached his current age of twenty; few children in the 1950s survived beyond elementary school age. Thanks to advances in biomedical research, half of the children with CF today will live into their early twenties and beyond. Yet this increase only underscores the need for greater research efforts to stop CF from robbing our country of the most productive years of our young adults, whose health often begins to fail just as they establish their careers and families.

The importance of your strong support for National Institutes of Health (NIH) is especially evident in the phenomenal progress that has resulted since you, the members of Congress, mandated a study on the status and future directions of cystic fibrosis research.

The study clearly pointed to the need for an across-the-board approach to research on CF, determining that a series of CF research centers should be developed to bring scientists from diverse fields together to unravel the complexities of CF. Because so much was yet unknown about CF, the report stressed that centers would need to focus on preliminary studies through seed grants, enabling scientists to form hypotheses and build data. Your mandated study stated that, once these steps were accomplished, scientists would be equipped to compete for major, long-term funding.

Unfortunately, federal funds were not available to initiate these much-needed research centers. Research had to be done, so the CF Foundation accepted the challenge to establish and fund this nationwide network of research centers. Never before had a private foundation taken the initiative to underwrite research programs of this magnitude through private donations.

In 1982, we set a five-year goal to raise $15 million for these research centers. By the end of 1986, we had awarded eleven centers with five-year commitments approaching $1.5 million each. Selected through a stringent scientific peer review process, the eleven centers are located at leading universities and research institutions across the nation.

Almost immediately upon funding, these centers began making scientific advances that surpassed all of the progress made in the previous 30 years of CF research. For the first time, researchers developed a working hypothesis for CF that finally explained the diverse effects of the disease on the body.

Scientists have rapidly built/on this hypothesis to the point where there is now significant understanding of the basic cellular defect in CF. In discovering and documenting the abnormal movement of ions in CF-affected cells, our investigators have identified the areas of research that hold the greatest promise for a comprehensive control and a cure to this disease.

Our centers have pushed CF to the forefront of genetic research as well. Only a short while after receiving CF Foundation support, one of our centers identified a crucial genetic marker linked to the CF gene. In a matter of months, CF researchers progressed from having no idea where the CF gene was in the billions of base pairs of genetic material to pinpointing its location to a tiny section of chromosome 7 -- a leap that eliminated 99.9% of human genetic material. Now our researchers are applying innovative techniques -- many being used for the very first time -- that will provide a clear picture of the CF gene for even greater progress.

With proof of the scientific opportunities offered by CF researchers, the NIH has made major awards to three of our centers. In addition, the NIDDK and the NHLBI recently issued two requests for proposals that directly build on the two-pronged genetic and cellular research strategy used at the centers.

These examples of the NIH working with the CF Foundation show the complementary research progress that can be achieved when the private sector's ability to respond to opportunity is combined with the public sector's role in fostering long-term national efforts. The advances in CF research today are a result of the initial investments made by the CF Foundation.

I cannot overemphasize that future advances resulting from this public-private partnership will only be possible with the support of the NIH. While we are willing to work as hard as we can to raise private CF research support -- indeed we have already committed to raise another $10 million to provide initial awards for several additional centers -- we cannot possibly provide the expanded support that is the NIH's domain for these centers to reach their full potential. We must be able to count on the NIH's ability to take over the funding for these centers after they have proven themselves and charted an ambitious yet realistic path to future progress. Without this support, the seeds which we have painstakingly sown and the vines which we have nurtured will not be able to bear fruit.

Therefore, we urge you to ensure comprehensive support of these research centers by incorporating the attached report language into the Committee's report. We support an overall NIH budget of $7.5 billion for a balanced research program in grants, training, clinical trials, equipment and facilities.

We could discuss the annual federal bill of $300 million to those with this disease, not to mention the suffering of their families. I would rather turn the argument around and be positive -- we are now so close to the key that your help with the NIH will help us open the door.

Moreover, with your support, the CF Foundation can continue to reinvest dollars into new centers and new scientific opportunities. We can continue to carry out the steps where we have proven our strength: starting the centers, building the research teams, and bringing the initial results -- that assure NIH support will be most prudent and worthwhile.

This is the first time that the CF Foundation has come to you with such a special request for your guidance. But the opportunity is compelling. We cannot afford, nor can our country afford, to wait for each center to earn individual funding from the NIH. The three centers that have earned such support have proven the excellence of our research, but we have eight more centers in our program which deserve comprehensive support as well.

When the NIH told us there was no money to start research centers, we accepted the challenge that arose from your mandate. Now, we are providing the NIH with the opportunity to benefit from the groundwork we have laid and to fund only the most excellent of investigations. Having proven our commitment and with even greater plans to extend that commitment, we now must turn to you who can ensure that our research centers deliver a cure for my son and the many other children and young adults with CF during their lifetime. Thank you for your consideration.

CYSTIC FIBROSIS (CF) is a common lethal genetic disease affecting approximately 30,000 people in the United States. In addition, an estimated 12 million Americans are symptomless carriers of the gene that causes CF. Recent research progress has led to the identification of markers for the CF gene, thereby pinpointing the gene to chromosome 7, and the discovery that defective regulation of ion channels in cells may be causing the respiratory and digestive symptoms of the disease. The National Institute of Diabetes and Digestive and Kidney Diseases and the National Heart, Lung and Blood Institute have long supported intramural and extramural research programs in cystic fibrosis. The success of existing centers and other research center programs supported by the Cystic Fibrosis Foundation, has proven the vitality of the multidisciplinary approach such centers can bring to the research problems that surround CF and has demonstrated the positive results of a public-private funding partnership. In view of the medical burden caused by cystic fibrosis and recent encouraging research progress, the Committee provides an additional $5 million to the NIDDK and the NHLBI to continue to support and to establish Cystic Fibrosis Research Centers. Such centers would provide the interdisciplinary environment and the core resources necessary to facilitate research to find the CF gene and support additional studies that will develop from that discovery.

Senator WEICKER. Are these specific programs that are being funded now by your foundation?

Mr. DRESSING. Yes; they are. These are centers that were established by the foundation. They today are 11 in number, in all of the areas of science that we need to impact the disease, but they have, because of the enormous amount of technology that has been developed in looking at a disease like cystic fibrosis, are beyond our scope to continue to fund. There are programs now that are high quality science, that rightfully should be assumed by the National Institutes of Health. And what we are proposing is, take that responsibility off of us, let us take our dollars to go out and find the people that are going to be necessary to bring this job to a conclusion, and I think we all win. We are not bringing to you anything but high quality science. We are asking for $5 million that be split between NHLBI and NIDDK to support those programs which we have been able to identify.

Senator WEICKER. I will certainly be glad to broach the subject with my friends at NIH. I agree with you as to the amount being put into research which we spend on taking care of a particular illness, and that really highlights the fact that we are going to have catastrophic health insurance as a major issue before us. At the present time the Federal Government spends about $2,000 per person on health care. We are spending $25 per person on research. Obviously, the catastrophic costs are going to add to that per person cost. We have to ask ourselves why we are not spending more money on research so that we do not end up with a catastrophic health situation.

Thank you very much.

STATEMENT OF JAMES E. MULVIHILL, VICE PRESIDENT FOR HEALTH AFFAIRS, UNIVERSITY OF CONNECTICUT HEALTH CENTER, AMERICAN DENTAL ASSOCIATION

Senator WEICKER. Our next witness is Jim Mulvihill, vice president for health affairs, University of Connecticut Health Center, speaking on behalf of the American Dental Association.

Dr. MULVIHILL. And all the Nation's dental schools.

I am pleased to be here, Mr. Chairman. I must echo the accolades of others preceding me, except I have got an extra special one because I am proud that you are my Senator because of your courage and leadership, not only in areas of health but in several other areas, and I am very pleased to be here before you.

This part of the testimony relates to the NIDR, but there are also some programs relating to health professions manpower that I do want to touch upon. As you know, there has been a dramatic success in reducing dental caries in children and tooth loss in adult population declined significantly with tremendous dollar savings in terms of care and in terms of psychological savings also to people.

However, intensive research on the diseases such as AIDS, cranial-facial malformations, and oral manifestations of cancer must continue. Eighty percent of the dental research and research training is sponsored by the National Institute for Dental Research. We recommend an appropriation of $148 million for the NIDR so that this vital research can be sustained.

The witness following me from the American Association for Dental Research, Dr. Donald Legler, will comment in greater detail on the NIDR request. I would now like to focus the bulk of my remaining time on various matters relating to health professions, training programs. I particularly would like to emphasize the need in an area that I know you are particularly interested in, which is geriatric training. Because the proportion of our Nation's elderly population is increasing at a rapid pace, it is essential that the current generation of health professionals be adequately prepared to treat elderly patients.

We ask that the subcommittee continue your support for the geriatric education centers that you established last year, and that you provide $10 million in addition to fund the newly created geriatric training program support. The geriatric education centers assist faculty in coordinating geriatric curricula for health professional students in our Nation's schools and provide essential instruction in geriatrics to existing practitioners in the community.

The new geriatric training authority requested provides that 1- and 2-year postdoctoral fellowships be established to train physicians and dentist geriatricians. These fellowships will offer indepth study in geriatrics to small numbers of academicians and researchers. For dentistry, there is a critical need for this initiative. There are approximately 170,000 dentists in the United States, and fewer than 30 have received formal training in geriatrics.

Our associations recommend that approximately 75 dental faculty members per year receive intensive training in geriatric dentistry to meet the anticipated demand for the future in this area of highly specialized care. We also ask the subcommittee to fund health professions training assistance programs at the fiscal year 1988 authorized level of $152.2 million. Our written statement that we have submitted goes into greater detail on this.

Finally, I would also like to ask the subcommittee to appropriate $7.57 million for the important oral disease prevention activities undertaken by the Centers for Disease Control's Dental Disease Prevention Activity Branch. Many of these activities are relating to identifying the early oral manifestations of AIDS in patients, to looking at problems relating to the prevention and continuing monitoring of fluoridation efforts in every State in the United States, and to deal with the problem of smokeless tobacco.

In addition, we would like to see $70 million for data collection and analysis as performed by the National Center for Health Statistics, and a very modest sum of $300,000 for support as a separate line item of the Office of the Chief Dental Officer.

PREPARED STATEMENT

I would like to thank you very much for allowing me to be here today and for your consideration of this testimony.

[The statement follows:]

STATEMENT OF JAMES E. MULVIHILL

The American Association of Dental Schools (AADS) represents all of the nation's dental schools as well as hospital dentistry and dental auxiliary education institutions. Ours is the only national organization concerned exclusively with the needs of dental education. We are most appreciative of the longstanding support this Subcommittee has provided to health and education programs.

AADS endorses the testimony of the American Association of Dental Research regarding NIDR funding and the testimony of the American Dental Association, outlining additional funding priorities for FY 1988. This statement, submitted for the record, describes funding recommendations for programs especially important to dental education.

Since 1981, health professions education funding has declined by $26.9 million -- a decrease of almost 30% in inflation adjusted dollars. The modest amount of federal assistance still provided to health professions schools and students is targeted to achieve specific goals in the national interest. These federal funds no longer encourage an increase in the number of health care professionals. Rather, they support programs that recruit and retain minority and disadvantaged students, finance start-up of primary care training--including general dentistry residencies--and aid in the establishment of area health and geriatric education centers.

AADS asks the subcommittee to fund health professions training assistance (Title VII) programs at the fiscal year 1988 authorized level of $152.2 million, and to provide $10 million in additional support for the geriatric training program created last year by the 99th Congress.

Because the proportion of our nation's elderly population is increasing at a rapid pace, it is essential that the current generation of health practitioners be adequately prepared to meet the needs of elderly patients.

Geriatric Education Centers (GECs), established over the last four years, assist health professions and basic science faculty in coordinating geriatric curricula for health professions students. The Centers enhance the interrelationships of the professions, and aim to involve all faculty in geriatric medicine. The Centers also provide essential instruction in geriatrics to area practitioners. Our Association urges the Subcommittee to provide $10 million in support for GECs as was done last year. This will allow the existing Centers to maintain their current services, and provide for some minimal growth in the overall number of GECs.

On October 17, 1986, Congress enacted legislation to complement the GEC initiative. This new authority provides that one- and two-year postdoctoral fellowships be established to train physician and dentist geriatricians. The fellowships will offer in-depth study in geriatrics to a small number of academicians and researchers, for which there is a critical need. Of the approximately 170,000 dentists in the United States, fewer than thirty have received formal training in geriatrics.

AADS recommends that approximately 75 dental faculty members per year receive intensive training in geriatric dentistry. It is imperative that this level of effort be sustained from now until the year 2020 so that an adequate number of dental practitioners will be available to treat the functionally-dependent elderly population at that time. We ask the Subcommittee to provide sufficient funds for this important geriatric training initiative; we estimate that at least $3.35 million will be needed to support the necessary dental fellowships alone.

In addition to funds for geriatric training, it is critical that funding for the Disadvantaged Assistance program be continued, as this is the sole federal support for recruiting and retaining minority and disadvantaged students.

Health Career Opportunity Program (HCOP) institutional grants may be credited with keeping the percentages of Black and Hispanic students stable during the past several years, however, actual enrollment levels of these minority groups have fallen since 1978. The disparity between the number of minority students graduated from dental school and the number that would be required to achieve proportionate representation will grow unless adequate resources are made available to address this problem.

The Disadvantaged Assistance authority also includes a new stipend program that provides financial support for the neediest students. This program supplies the only grant money available to dental and medical students after their first year of study. We urge the Subcommittee to fully fund the Disadvantaged Assistance program at $30 million, thereby providing $24 million for HCOP recruitment and retention projects and $6 million for Disadvantaged Assistance stipends to medical and dental students.

Qualified students from economically desperate backgrounds frequently abandon hope of a career in dentistry when they realize they will need to depend upon loans to meet their total educational costs, and that the average debt of a 1986 dental school graduate was almost $40,000. The Exceptional Financial Need (EFN) program provides the scholarships these students need to get started. AADS recommends full funding of $7 million for this program in the coming year.

General Dentistry programs provide the skills and clinical experience necessary for the treatment of handicapped and other patients requiring specialized or complex care, including those who suffer from Acquired Immune Deficiency Syndrome (AIDS). Last year, only about one-half of the 2,000 dentists who sought advanced general dentistry training were accommodated. Past federal support has been vital to the establishment and initial maintenance of these residency positions. A modest investment will allow the creation of new residency positions, which generally become self-supporting within three years. Accordingly, we recommend that Family Medicine and Dental General Practice Residency programs receive an appropriation of $39.4 million, which will allow $2.95 million in FY 1988 for dentistry, to continue this important effort.

Title VII funding also supports Area Health Education Centers (AHECs), which provide multidisciplinary training to health professsions students in non-traditional settings. This program is designed to encourage graduates to locate in rural areas and to establish a bridge between the rural practitioner and the larger health science centers. AADS urges the Committee to fully fund AHECS at $18 million in FY 1988.

Although the Health Education Assistance Loan (HEAL) program requires no Federal outlay, our Association is very concerned that the program remain a viable "loan of last resort" for dental students. Students pay the market rate for these unsubsidized loans and are assessed an insurance fee to offset defaults. Last year, 4,566 dental students borrowed over $47 million through the HEAL program to finance a portion of their dental education. Even though the cost of the HEAL program is borne entirely by participating borrowers, the Administration has repeatedly tried to terminate or significantly restrict access to this program.

We ask the Subcommittee's assistance again this year in assuring continued access to the HEAL program by inserting language in the FY 1988 appropriations bill that will allow credit guarantees of up to $305 million in HEAL loans for fiscal year 1988 and will require DHHS to release HEAL credit without regard to apportionment or other similar limitation.

We thank you for this opportunity to testify on the FY 1988 appropriations and reiterate our appreciation for the substantial efforts members of this subcommittee have undertaken to benefit the health of the American people. The AADS would be pleased to respond to any questions you may have.

Senator WEICKER. Jim, you raise a good point, and I feel strongly as you do relative to this matter of geriatrics—whether it is dentists or doctors or whoever. I am fairly certain with Senator Chiles coming from the State of Florida we will have his help but we have got a big problem coming over the hill here and we are not prepared in any manner, shape, or form. Your experience with the dental schools is certainly mirrored throughout the entire medical profession in all the medical schools, in terms of preparing those for geriatric medicine.

My question to you is: is this a figment of my imagination? The statistics as I have seen them are that by the year 2000 the 85-year and over population doubles, and by the year 2010 the 65-year and over population doubles.

Dr. MULVIHILL. That is correct. I think, Senator, that we really have to be thinking of the future here, and the year 2000 and 2010, and as we have been so concerned about our youth, in the future we will have to be greatly concerned about our expanding, increasingly long-lived geriatric population who deserve the right to the best quality of life they can have in their elderly years, and both in dentistry and in medicine, and as you know at the University of Connecticut Health Center we have established a center for studies of aging and gerontology both in our medical and dental school at the University at Storrs, we are very ill-prepared for are working in the area of geriatrics in the future, and the sums that we are requesting in this budget we think are indeed very modest.

You have put previous testifiers on the horns of a dilemma when it comes to supporting AIDS research versus compromising the rest of basic research. There is another one which is supporting really the quality of care and research and adequate education of practitioners for the future of managing the elderly, and of course I share the same instincts you do. We probably ought to be building fewer bombs and torpedoes and fashioning more magic bullets to deal with disease.

Senator WEICKER. Probably no profession can better illustrate the point that we tried to make with earlier witnesses regarding the savings which can be achieved through research than the dental profession. Do you have any figures as to what the public has saved, let us say in terms of tooth decay, by virtue of the advances that have been made?

Mr. MULVIHILL. Yes; they are very significant figures, and we want to make sure the American Dental Association and the American Association of Dental Schools transmit them to you, because you will see that the savings are literally in the billions. Recently Daniel Greenberg, who you know, wrote a very moving editorial in the paper indicating that this is probably the best kept secret and the best success story of everything that has been supported in the area of biomedical research, the efforts of NIDR. There is no reason now why any child born in this country ought to have suffered the ravages of tooth decay if they just follow the things that have been learned through support of research at the NIDR. There is no reason why now that individuals over 35, 60 years old, you know, then you get up into the geriatric population beyond 70, why, people ought to be heading and think that they are assigned to having full dentures for the rest of their lives, and those are tremendous savings not only in the dollars spent for care but in emotional savings of people, their ability to continue to function in life, function with sound psychological basis as well as physiological basis, and there probably really is not any institute at the NIH that could show you more clearly, and we will get all those figures for you, the tremendous dollar savings from a budget that incidentally happens to be one of the smallest of all the NIH budgets, but we have had tremendous spinoff from that budget.

Senator WEICKER. Thank you very much.

Dr. MULVIHILL. Thank you, Senator.

STATEMENT OF DONALD W. LEGLER, AMERICAN ASSOCIATION FOR DENTAL RESEARCH

Senator WEICKER. Dr. Donald Legler for the American Association for Dental Research.

Dr. LEGLER. Mr. Chairman, I serve as dean and professor of oral biology at the College of Dentistry, University of Florida at Gainesville. I am appearing today on behalf of the American Association for Dental Research, of which I am a member along with over 4,000 other dental scientists. Members of the association do appreciate this opportunity to present testimony relative to the 1988 budget of the National Institute of Dental Research.

I wish to start out simply thanking you personally for your genuine interest in research in general and the contributions of other people on this committee toward that objective. As you know, research in the dental arena covers a full spectrum of oral disease processes relative to understanding the disease, treating the disease, and preventing the disease, basic and applied.

Over the past few decades—this was just discussed—research has targeted dental care and tooth decay as one of its prime areas of emphasis, and there has been dramatic successes. The wearing of dentures is almost becoming an obsolete observation. Folks have fewer teeth extracted, children and adolescents less tooth decay, and if we look at expenditures for dental services, just to partially answer the question which was asked earlier, in the level of 1981 dollars, we are looking at about $17 billion in expenditures for dental area. That stayed level for about 5 years. I would suspect that the savings would be in excess of $2 billion a year in dental care costs that are traceable largely to advances in dental research.

Well, we have made some successes. I think the cost benefits are there to the American public. I think it is a record to be proud of, but today we find ourselves with other areas on the agenda to address. Tooth decay in the elderly, the problem of gum line, if you will, of tooth decay. We need to recognize, I guess, that most of us in our society experience dental disease at some point, that it is a ubiquitous kind of disease, perhaps not life-threatening, but certainly enters into the quality of life.

We are now looking at attacking periodontal disease, growth and development disorders, root caries in the elderly, oral infections, development of better biomaterial. We clearly need to maintain the momentum that we have developed in the general research arena. In particular, the dental scientist award program is one that requires, I would suggest, continued attention. This program, now in its third year, is extremely valuable, we would submit, in providing a cadre of trained researchers for dental research for the future. We respectfully suggest that an additional $1.8 million be provided in this program in 1988.

Another key aspect of the NIDR program is the focus on thematic centers. We have a thematic center, for example, at the University of Florida in periodontal disease research, one of five in the United States, a key program looking at problems of the middle aged and elderly, periodontal disease being a disease that the majority of people over the age of 40 encounter.

We in our own Institute have made some substantial progress in understanding and treating this disease. We find that the NIDR also has centers that carry oral biology plans for developing new such centers in such areas as pain control, so that we would urge that the committee support an increase in funding for an additional 12 center grants in the NIDR budget for the coming year. In terms of the NIDR budget itself, we would also request that a funding level of $148 million be established for the NIDR next year.

Finally, we would hope that the committee would also elect to support the continuance of the Biomedical Research Support Program, the BRSP program, not a program specifically designed for dentistry, but certainly one that helps all health professional schools in moving ahead with their research programs.

PREPARED STATEMENT

Mr. Chairman, this concludes my remarks. I am pleased to be with you today.

Senator WEICKER. Thank you very much, Dr. Legler. I appreciate it.

[The statement follows:]

STATEMENT OF DONALD W. LEGLER

Dental Research: Research is the lifeblood of the nation's oral health. The advances we have seen toward a school-age population entirely caries free, toward an adult population with no tooth loss, are directly attributable to dental research, to the work of the National Institute of Dental Research. NIDR sponsors more than 80% of oral health research and research training.

Continued appropriate funding for the work of NIDR will soon effect similar control of other dental diseases, periodontal disease and herpes simplex among them.

Research at NIDR is now being directed toward improved means of prevention and treatment of special populations that are at high risk of developing decay: the handicapped, those with weakened immune systems and the elderly.

As the result of funding last year, research on acquired immune deficiency syndrome (AIDS) is now underway at NIDR.

By the year 2000, the number of adults over 65 will rise 30%, increasing from 28 million to 36 million. Studies on the special oral and dental problems of this rapidly growing segment of the population are needed. A recent survey of adult dental health has shown that people are retaining their teeth longer. As a result, root caries are now fairly common in seniors. Studies are needed to develop new and improved restorative materials capable of bonding with the structure of the tooth root. Additional research is also needed in the area of implants, where tremendous strides have been made in the search to find ways to replace lost teeth.

Recent progress in understanding craniofacial malformations has resulted from advances in cell biology and genetics, but much work remains to be done. Today normal and abnormal development are being probed using sophisticated techniques like recombinant DNA and monoclonal antibodies to clarify the role of environmental agents and genetic defects in causing malformations. In some cases these studies have been able to identify vulnerable periods in fetal development and elucidate the biochemical abnormalities that underlie birth defects. Although our understanding of how the embryo develops is improving, much basic research remains to be done before we can use these methods to prevent craniofacial birth defects.

Continuing this vital work at NIDR is contingent upon adequate funding, which will assure that the best available dental researchers will enter into and remain active in the field.

The Administration's request of $113 for FY 1988 is a step down from the current NIDR appropriation of $118 million. Programs such as the NIDR Dentist Scientist Award and new and competing dental research grants cannot be maintained at their current levels of effectiveness unless recognition is given to the increasing costs of such research.

For NIDR to maintain its research programs at their present levels of quality, a budget for FY 1988 of $148 million is necessary.

Dental Disease Prevention: The Centers for Disease Control's Dental Disease Prevention Activity (DDPA) provides a national focus for the control and prevention of oral disease and conditions such as dental caries, periodontal diseases and oral cancer.

The Center conducts epidemiological studies to determine the significance of oral conditions that provide evidence of infection with AIDS virus. It addresses injury control through quantification of epidemiological data related to orofacial trauma, its type, anatomic location and cause. It develops and disseminates smokeless tobacco prevention and intervention programs. It promotes acceptance of national oral health objectives.

Finally, the DDPA monitors fluoride levels for public water supply systems, trains state and regional engineering personnel in fluoridation techniques, provides technical assistance to states and communities considering water fluoridation, assists in periodic oral health assessments for communities that initiate fluoridation and reports on the oral health and economic effects of providing or discontinuing fluoridation of water supplies.

Our Associations urge an appropriation for DDPA of $7,570,000 for FY 1988.

Health Statistics: As the principal federal agency for monitoring health status and its relationship to the several aspects of our society, the National Center for Health Statistics (NCHS) conducts a variety of activities that are vital to the science of dentistry, among them, the collection of health interview data, statistics from health examinations and analysis of studies within NCHS and by other research groups. NCHS collects important data on dental visits, public awareness of oral disease risks and personal preventive dental practices. These data provide a basis for preventive dental programs developed for the benefit of specific population groups.

An appropriation of $70 million would allow NCHS to continue its annual survey activities in sufficient depth to be statistically sound and of the necessary breadth to be useful to all major sectors of the health field. Additionally, with regard to the 1988-93 National Health and Nutrition Examination Survey (NHANES III), this funding level would permit NCHS to develop a substantial analysis plan so that the first three years of data collection can support a 1991 evaluation of 1990 prevention objectives. These data are vital to the establishment of national objectives for the year 2000.

Office of the Chief Dental Officer: The Chief Dental Officer, Public Health Service, represents the Surgeon General in oral health matters, evaluates and proposes oral health policy and provides the necessary coordination between PHS offices and agencies in their initiatives to prevent disease and strengthen oral health. The Chief Dental Officer also represents the PHS in liaison with the World Health Organization and the Ministries of Health in foreign countries with regard to oral health issues.

Our Associations support inclusion of the Office of the Chief Dental Officer in the budget for the Office of the Assistant Secretary for Health as a separate line item. Appropriate staffing of this office requires an appropriation of $300,000.

STATEMENT OF DIANE DE ROOS BASSAGE, AMERICAN DENTAL HYGIENISTS' ASSOCIATION

Senator WEICKER. Our next witness is Connie Edstrom Tussing, president of the American Dental Hygienists' Association.

Ms. BASSAGE. Good morning. Ms. Tussing was not able to be with you this morning. My name is Diane DeRoos Bassage. I am a member of the board of trustees of the American Dental Hygienists' Association and a private practice dental hygienist here in Washington.

On behalf of the American Dental Hygienists' Association, I would like to thank you for this opportunity to testify in support of fiscal year 1988 appropriations for the Department of Health and Human Services, especially the National Institute of Dental Research. We have prepared a longer statement, but in the interest of time we will submit that for the record and summarize our recommendations.

Organized in 1923, the America Dental Hygienists' Association represents 30,000 members across the country dedicated to assuring the highest level of preventive dental care. Originally formed to develop communication and mutual cooperation among hygienists, ADHA today serves as the advocate for dental hygienists at the Federal, State, and local levels.

Mr. Chairman, dental hygienists today play a vital and cost-effective role in the delivery of oral health services, similar to the evolving role initially played by registered nurses in the delivery of medical services. As the foremost preventative professional on the dental care team, the dental hygienists are licensed providers. The role of these activities in achieving good dental health is impressive. In recent years we have witnessed a 50-percent decrease in tooth decay overall, and one-third of American grade school children are now cavity-free.

The recently announced results of the national survey on adult dental health conducted by the National Institute of Dental Research indicates that America's teeth are in better shape than ever. The tremendous progress that has been made in the dental health of children has begun to carry over into the middle aged population. However, a great deal remains to be done, especially among our elderly. The NIDR survey found that seniors had a 63-percent incidence of root caries compared with a 21-percent incident among employed adults. In addition, 42 percent of seniors surveyed were missing all of their teeth, while only 2 percent had retained all 28 permanent. Continued research at NIH is critical to the future of prevention.

The National Institute of Dental Research has helped to revolutionize our knowledge and provision of dental health. Through NIDR sponsored research we have identified the major cause of certain forms of dental caries, validated the importance of fluoride in oral health regimes, been able to work toward a vaccine against dental caries, improved adhesive sealants to protect teeth from the ravages of dental caries, identified the link between good nutrition and good oral health, and demonstrated the importance of education and promotion of activities in assuring good oral health.

Despite these successes and last year's increase in funding for the Institute, funding for NIDR has not been commensurate with the research need as reflected in the NIDR long-range research for 1985–89. The President's budget reflects a retreat from responsible health care policy. The administration's fiscal year 1988 budget plan, if implemented, would have a devastating effect on dental research. The ADHA endorses a budget of $141.5 million for NIDR, a budget that would allow NIDR to proceed with timely implementation of its long-range plan. This recommendation is consistent with those of the Ad Hoc Coalition for Medical Research Funding.

I would also like to speak to community health centers and ask that they receive $44 million, and migrant health centers $45.4 million, figures consistent with the fiscal year 1988 authorization level. In addition, ADHA recommends that the appropriations for the Centers for Disease Control should include funds to allow the director to allocate $1.3 million for dental disease prevention activity. We would thank the committee repeatedly for improving quality and availability of dental health care services throughout the country. We sincerely hope that this committee will continue to support prevention health programs as the most responsible method for a long-range reduction in national health care expenditures.

PREPARED STATEMENT

Pursuant to this goal, we hope committee members will seriously consider our specific funding recommendations. Again, thank you for the opportunity to present our views.

Senator WEICKER. Thank you very much for your very eloquent testimony. We appreciate it.

[The statement follows:]

STATEMENT OF DIANE DEROOS BASSAGE

The American Dental Hygienists' Association (ADHA) very much appreciates this opportunity to present its recommendations regarding FY 1988 Appropriations for the Department of Health and Human Services (HHS), and in particular, the National Institute of Dental Research (NIDR). Organized in 1923, ADHA represents 30,000 members across the country dedicated to assuring the highest level of preventive dental care. Originally formed to develop communication and mutual cooperation among hygienists, ADHA today serves as an advocate for dental hygienists at the federal, state and local levels.

ADHA's mission, "to improve the public's total health by increasing the awareness, of and access, to quality oral health care and to position the dental hygienist as the preventive oral health professional," reflects the professional goals of ADHA's membership. As the foremost prevention professional on the dental care team, dental hygienists are licensed providers. Hygienists provide educational, clinical and therapeutic services supporting total health through the promotion of optimal oral health. Our members are responsible for providing treatment that helps prevent oral disease such as dental caries and periodontal disease.

Today, dental hygienists play a vital cost-effective role in the delivery of oral health services, similar to the evolving role initially portrayed by registered nurses in the delivery of medical services. Dental hygienists perform numerous preventive and therapeutic services. As contributing professionals in the delivery of oral health care services, dental hygienists are involved in direct patient care, including but not limited to, patient education, review of medical/dental histories, formulation of health promotion activities, assessment of soft tissue health, prophylaxis, x-rays, soft tissue curettage, root planing, local anesthesia, and initial therapy recommendations.

THE STATE OF AMERICAN DENTAL HEALTH

The role of these activities in achieving good dental health is impressive. We have been witness to a fifty-percent decrease in tooth decay overall, and one third of American grade-school children are now cavity free. Indeed, research scientists now suggest that elimination of most major dental diseases may be possible within the lifetime of oral health professionals now practicing. The recently-announced results of the national survey conducted by the National Institute of Dental Research (NIDR) regarding adult dental health indicates that America's teeth are in better shape than ever, though some population groups still are in need of special dental attention. The survey results also suggest that the tremendous progress that has been made in the dental health of children has begun to carry over into the middle-aged population.

Yet a great deal remains to be done, especially among our elderly. The survey found that seniors had a 63% incidence of root caries, compared with a

21% incidence among employed adults. In addition, 42% of seniors surveyed were missing all their teeth, while only 2% had retained all 28 permanent teeth.

Indeed, we are still far from the ultimate goal of total prevention:

- ° Overall, Americans are spending $20 billion a year for treatment of their dental and oral problems;
- ° Americans lose 32 million days of work due to dental problems, costing the American economy $3 billion in lost wages. Amazingly, this economic statistic does not even include losses in productivity;
- ° 23 million Americans are missing all of their teeth;
- ° Despite reductions in dental cavities, the average American child has at least one cavity lesion by age 8; 4 by age 12, and 11 by age 17.

Counterbalancing these gloomy figures, though, is the promise of prevention. Research has shown that at least one form of cavities (coronal caries which attack the crowns of teeth) is preventable. Herein lies the true value of the hygienists' mission: as the lead advocates, spokespersons and educators in preventive oral health care, we can do something about preventable disease today.

In battling preventable oral disease, the federal government provides three major services. Knowledge about the causes of dental diseases and preventive techniques can be increased through basic biomedical research. Improved methods of health care delivery can be identified, tested and quantified. Delivery of health care services to populations without adequate access to dental care and dissemination of new techniques can be achieved. In these efforts, the Congress can provide assistance through adequate funding of the National Institute of Dental Research and the Centers for Disease Control's Dental Disease Prevention Activity.

NATIONAL INSTITUTE OF DENTAL RESEARCH (NIDR)

Founded in 1948, NIDR, one of the 12 major biomedical research institutions within the National Institutes of Health, has helped to revolutionize our knowledge and provision of dental health. In identifying the causes of preventable dental diseases and the appropriate strategies to combat these maladies, NIDR has led the way. Through NIDR sponsored research, we have:

- ° identified the major cause of certain forms of dental caries;
- ° validated the importance of fluoride in oral health regimens;
- ° been able to work towards a vaccine against dental caries;
- ° improved adhesive sealants to protect teeth from the ravages of dental caries;
- ° identified the link between good nutrition and good oral health; and
- ° demonstrated the importance of education and promotion activities in assuring good oral health.

Despite these successes, and last year's increase in funding for the Institute, funding for NIDR has not been commensurate with the research need. Although the Long-Range plan indicates a budget need of $153.8 million for NIDR in FY 1988, plan implementation has been slowed, in part due to the recent budgetary restrictions which have affected all of NIH. Thus, a budget for FY 1988, which would allow NIDR to proceed with timely implementation of the Long-Range Plan, would provide NIDR with $141.5 million for the upcoming fiscal year.

The President's budget instead reflects a retreat from a responsible federal health care policy. The Administration's FY 1988 budget plan is all too reminiscent of past recommendations: a 10.5 percent reduction in NIH funding, funding of 5,000 new and competing research grants (compared with 6,200 grants in FY 1987), and reducing the number of approved clinical trials, thereby impeding clinical application of new therapies. In addition, the Administration has proposed an irresponsible "carryover" of $334 million in FY 1987 funds to FY 1988, in clear contradiction to last year's appropriation bill. ADHA implores Congress to reject this reckless action, and applauds this Committee for already having addressed this issue in the currently pending FY 1987 urgent supplement appropriations bill.

NIDR has already suffered serious budget reductions in recent years. Yet the Administration would fund NIDR at $113 million, a reduction of $6 million from last year's appropriation. Although the Long-Range Plan indicated a need for $135.5 million in FY 1987, the Institute was funded at $119.4. The President's budget would severely compromise the Institutes' ability to expand their knowledge about how to fight dental disease. Inexplicably, the budget-cutters at OMB want to impair the NIDR's ability even to compete with inflation. The result would be a reduction in the number of new and competing grants from 401 to 363 (a cut of over 7%).

COMMUNITY AND MIGRANT HEALTH CENTERS

The Community and Migrant Health Centers (CMHC) grant program is designed to support facilities that provide comprehensive primary health care services as well as preventive and educational programs to medically underserved areas and migrant workers. In order to qualify for Community grants, facilities must meet certain criteria regarding scope and type of services provided, populations served, and the nature of the geographic area to be served. The Migrant grants are awarded to facilities which can best serve the unique needs of migrant workers. Unquestionably, these facilities provide basic health care to a segment of the American public which would otherwise not receive proper health care due to financial, occupational, and/or geographic factors.

Because these centers provide important preventive dental care services, ADHA recommends that the CMHC grant program receive funding commensurate with the FY 1988 authorization level as enacted in P.L. 99-88. At such levels, the Community Health Centers would receive $400 million and the Migrant Health Centers $45.4 million. Moreover, we believe that NHSC should receive $75 million so as to insure the highest level of quality care at the CMHCs.

CENTERS FOR DISEASE CONTROL

The Dental Disease Prevention Activity (DDPA) funded through the Centers for Disease Control (CDC) is a vital support mechanism for state dental health programs. The DDPA provides a national focus for the control and prevention of oral diseases such as dental caries, periodontal disease, and oral cancer. As the national leader in dental disease control and prevention, the DDPA provides consultation, training, promotional and educational support, disease surveillance, and other technical services to state and local governments and other professional, educational, and citizen organizations.

Because the dental hygenist is the preventive specialist on the dental health team, the ADHA believes that the mission of the DDPA is a crucial one if the dental well-being of the American people is to be best served. Dental disease prevention has proven to be a good investment. Preventive measures have averted much illness and functional disability, while greatly enhancing the quality of life for the American public. Given the fiscal constraints facing the federal government over the long run, efforts aimed at health promotion with the goal of reducing national health care costs must receive full support. Prevention programs such as the CDC's DDPA have helped save billions of dollars worth of repair and rehabilitation costs in the field of dental health alone. This work must be allowed to continue.

Although the DDPA is now a line item in the President's FY 1988 budget proposal, the CDC appropriation should include funds to allow the Director to allocate $1.3 million for the DDPA. In FY 1987 the DDPA's budget totaled approximately $580,900. ADHA's recommendation would allow the DDPA to resume and enhance its mission in education and health promotion - a mission which recently has been sorely neglected.

CONCLUSION

The 30,000 members of the American Dental Hygienists' Association appreciate the contribution this Committee has repeatedly made to improving the quality and availability of dental health care services throughout this nation. We hope that the Committee will continue to support preventive health programs as the most responsible method for long-range reduction in national health care expenditures. In this regard, we hope Committee members will seriously consider these specific funding recommendations and again we appreciate the opportunity to present our views.

STATEMENTS OF:

JOHN A. COLWELL, AMERICAN DIABETES ASSOCIATION
JOSH SELSER

Senator **Weicker**. Next we move to the National Institute of Diabetes, Digestive and Kidney Diseases. Our first witnesses are Dr. John Colwell and Josh Selser, on behalf of the American Diabetes Association.

Dr. **Colwell**. Senator Weicker, I want to thank you for this opportunity to present testimony on behalf of the American Diabetes Association, which represents the interests of over 11 million people with diabetes. Currently I am president-elect of the association, and I am also professor of medicine at the Medical University of South Carolina, and director of research at the Charleston VA Medical Center.

With me today is Josh Selser. Josh has diabetes. He is a spokesperson for the ADA, and he is also the star of the ADA's award-winning educational film entitled "Josh."

I would like to summarize some of the important points contained in my written statement.

In recent years, advances in diabetes research have greatly improved the quality of life of people who have diabetes, like Josh. Three recent examples of such research advances are the development of simple home blood glucose monitors, the use of laser therapy to prevent blindness, and intensive insulin therapy in diabetic pregnancy to improve fetal survival.

There are exciting research breakthroughs which may lead to prevention and a cure for diabetes. It is now accepted that insulin-dependent diabetes may be due to the destruction of insulin-producing cells by the body's immune system. Therefore immunosuppressive drugs are now under study in an attempt to prevent this destruction and hopefully to prevent insulin-dependent diabetes. The development of a new class of drugs, the aldose reductase inhibitors, may reduce the complications associated with diabetic nerve disease.

These research advances have major implications for the economy. Currently diabetes costs our society $14 billion a year. Potential savings from knowledge gained about laser therapy and the effect of strict control of blood glucose on diabetic eye disease are estimated to be at least $350 million annually. The ADA urges Congress to provide sufficient funds to take advantage of the opportunities before us. Specifically, we recommend an appropriation of $7.452 billion for NIH and $609 million for the National Institutes of Diabetes, Digestive and Kidney Diseases.

We also recommend that the Diabetes Control Program within the Centers for Disease Control be provided an appropriation of $7.9 million for fiscal year 1988.

The National Diabetes Advisory Board recently updated the Nation's long-range plan to combat diabetes. We support this plan, which recommends strengthening of current activities and which contains two major new initiatives, first, augmentation of the translation activities at the

CDC, and second, establishment of diabetes interdisciplinary research programs within the NIDDK.

These vital new initiatives will require additional funding of approximately $19 million for NIDDK and $6 million for the CDC diabetes control program, and we urge the subcommittee to include these additional appropriations for fiscal year 1988.

Now, the important part of the testimony. Josh would like to tell you a little bit about what it is like to have diabetes. Josh.

Master SELSER. Hi. My name is Josh. I am 6 years old, and I have had diabetes since I was 3. We need your help to cure diabetes. What I do not want to live with is having to prick my finger four or five times a day or more, and having to get injections two times a day, not eating when I want to, and sometimes having to eat when I do not want to. I just want to be a normal boy who does not have to prick his finger, get shots, who can eat when he wants to and he does not have to eat when whoever it is does not want to.

Again, we need your help to cure diabetes.

PREPARED STATEMENT

Senator WEICKER. Thank you. We will insert your statement, Dr. Colwell, in the record at this point.

[The statement follows:]

STATEMENT OF JOHN A. COLWELL

Mr. Chairman, I am John A. Colwell, M.D.,Ph.D., President-Elect of the American Diabetes Association (ADA). The ADA represents the interests of the 11 million Americans with diabetes, and is comprised of 58 state affiliate associations, 800 local chapters, and over 220,000 lay and professional members.

Diabetes is a disease in which the body does not produce or properly use insulin, a hormone needed to convert foods into the energy needed for daily life. Diabetes is the fifth leading cause of death in this country, and is a leading cause of heart disease, kidney disease, blindness, nerve damage, and foot and leg amputations. Diabetes costs our society approximately $14 billion annually in terms of expenditures for medical care and supplies, hospital stays, lost wages, reduced productivity, and other factors.

The prevalence of diabetes is disproportionately high among minority populations. For example, diabetes is 33 percent more common among blacks than among the general population.

In recent years, advances in diabetes research, care, and treatment have held out the promise of greatly improving the quality of life for people who have diabetes. We owe much of this country's progress in diabetes research to you, Mr. Chairman, members of this Subcommittee, and Congress in general for the leadership and foresight you have provided in recognizing the benefits, in human and economic terms, of the Federal investment in medical research.

The medical research community now stands at an exciting crossroads in diabetes research, with significant windows of opportunity holding great promise for finding a preventive and cure for diabetes and lessening the impact of the complications of this disease. An explanation of these research advances follows.

Diabetic Nerve Disease. Almost 70 percent of diabetes patients have some degree of peripheral nerve disorder, which can ultimately lead to infection and gangrene, and possibly to amputation. In fact, diabetes is the leading cause of non-traumatic foot and leg amputations in the United States.

Recent research advances have enabled scientists to identify a link between excessively high blood glucose levels (hyperglycemia) and nerve cell dysfunction, which may lead to pharmacological interventions to prevent this severe complication of diabetes. One of the biochemical changes associated with hyperglycemia is the conversion of glucose to sorbitol. Excess glucose results in high levels of sorbitol, which can ultimately impede nerve cell metabolism. Researchers are now exploring the development of drugs than can inhibit the conversion of glucose to sorbitol -- aldose reductase inhibitors -- which in animal and human subjects has shown great promise in increasing nerve conductivity and improving sensory reception.

Insulin Administration. Recent research advances have led to practical techniques that can supplement the traditional methods of administering insulin or administer insulin dosages more effectively. One such technique is the insulin infusion pump. Small, lightweight insulin infusion pumps solve a problem found with conventional methods of administering insulin -- the latter are unable to replicate normal insulin delivery, where insulin is constantly secreted at a basal rate with increased amounts secreted at meal times. Programmable insulin pumps have also been developed that can be implanted under the skin. Current research efforts are centered on the development of an implantable pump that contains blood glucose sensors that can constantly regulate insulin delivery in response to changing blood sugar levels -- essentially creating an artificial pancreas.

Diabetes and Pregnancy. Babies of diabetic mothers are at a significantly increased risk of intrauterine death, congenital malformations, excessive size and weight, respiratory illness, and jaundice. Research has shown that careful blood glucose and fetal monitoring and avoidance of hypoglycemia (low blood sugar) during the second and third trimesters of pregnancy can reduce the severity and frequency of most of these diabetes-related complications. Research has also shown that careful control of diabetes during the first trimester can reduce the risk of congenital malformations.

Diabetes and the Immune System. An increasing body of evidence suggests that the ability of the pancreas to produce insulin is lost in insulin-dependent persons as the result of the destruction of insulin-producing cells by the body's immune system. Research has indicated that altered activity among white blood cells, an important component in the body's immune system, may have an effect on the development of insulin-dependent diabetes. This means that the body's immune system plays a crucial role in the onset of diabetes and confirms research in a variety of fields that suggests that the immune system plays an important role in the development of disease.

Islet Cell and Pancreas Transplantation. Scientists can now transplant insulin-producing beta cells -- found in the islets of Langerhans in the pancreas -- that secrete insulin as the body requires it. Experimental work has also begun on the transplantation of the whole pancreas, which in many respects can be less difficult than transplantation of islet cells.

These are just a few examples of the important and exciting research related to the cure, prevention, and treatment of diabetes. These research advances have important implications not only for the health and well-being of people with diabetes, but for the economy as well. For example, it is conservatively estimated that the potential savings from knowledge gained about the effects of strict control of blood glucose levels on diabetes and the prevention of eye disease through the use of laser therapy are at least $350 million annually.

Looking beyond the area of diabetes research, cure, and treatment, a well-developed body of evidence indicates that Federal investment in medical research generates a remarkably high rate of return. A variety of studies have shown that the rate of return on $1 invested in medical research ranges from $8 to $13.

THE AMERICAN DIABETES ASSOCIATION (ADA) PROPOSAL

National Institutes of Health (NIH)

The ADA plays a leadership role in the Ad Hoc Group for Medical Research Funding, a coalition of over 150 organizations that for the past six years has developed comprehensive funding counterproposals for NIH and ADAMHA.
We enthusiastically support the recommendations of the Ad Hoc Group for an FY 1988 NIH appropriation of $7.452 billion. The proposal would provide another $240 million for badly needed renovation and rehabilitation of research facilities, should Congress provide general authority to NIH for construction and renovation of outmoded facilities.

Our FY 1988 recommendation would provide a 38 percent award rate, a level sufficient to fully fund approximately 7,000 new and competing research project grants, and would provide about a 20 percent increase in other NIH mechanisms.

For NIDDKD, we recommend a FY 1988 appropriation of approximately $608 million -- a 19 percent increase over the enacted FY 1987 level. This amount would provide a 40 percent award rate, sufficient to fund 736 research project grants at full cost. It would also allow the NIDDKD to continue the important groundbreaking initiatives referred to earlier in this statement. Further, urgently needed expansion of centers, the research trainee pool, and other mechanisms would be provided under this proposal.

Centers for Disease Control (CDC)

The Diabetes Control Program (DCP) within the CDC provides assistance to 28 state health departments for demonstration programs addressing the complications of diabetes. For the past several years the Administration has attempted to "zero out" the DCP in its budget submissions, but the Subcommittee has recognized the value of the DCP and protected it from elimination at a level of $7.5 million.

Savings produced by the DCP are quite substantial and result from reduced hospitalization, reduced surgical costs, and reductions in mortality and morbidity. This program is another example of how CDC can cost-effectively translate research results into practice. We therefore urge the Subcommittee to provide the DCP with an appropriation of at least $7.9 million for FY 1988.

NDAB Long-Range Plan. The National Diabetes Advisory Board (NDAB) recently completed an update of the Nation's long-range plan to combat diabetes. The NDAB undertook a lengthy review of the progress over the last ten years in diabetes research, and assessed windows of opportunity for future research endeavors.

The ADA supports the recommendations made in the updated long-range plan, and requests that the Subcommittee consider and adopt two major new initiatives outlined by the NDAB. First, we recommend the expansion of diabetes center programs at NIH to include inter-disciplinary research programs within the NIDDKD. These programs would accelerate the integration of state-of-the art scientific techniques into diabetes research.

The second initiative calls for the establishment of a diabetes translation center at the CDC. We believe the CDC translation initiative is necessary to transfer the results of research into practice in a timely, effective manner.

Implementation of these two new initiatives will require additional funding -- $19 million for the NIDDKD and $6 million for the CDC. We urge the Subcommittee to include these additional appropriations for FY 1988.

Mr. Chairman, the leadership you and the members of your Subcommittee have provided as champions for the cause of greater funding for health research is one of the principle reasons why the United States medical research enterprise is the envy of the world. We hope that the Subcommittee adopts our funding recommendations for programs that are essential for diabetes research, care, and treatment.

Senator WEICKER. You are very articulate. I am glad you introduced the witness. Otherwise, I would have asked which was Dr. Colwell and which was Josh Selser. [Laughter.]

But you are a very good spokesperson, Josh, for all diabetics, both children and older ones also. And I appreciate your testimony very much, Dr. Colwell.

Senator Harkin.

Senator HARKIN. No; I just also want to compliment you. I am sorry I got here late. I had to rush in from another committee, but thank you for coming, and Josh, thank you. Where are you from, Josh?

Master SELSER. Pardon me?

Senator HARKIN. Where are you from?

Master SELSER. Pittsburgh.

Senator HARKIN. Pittsburgh, PA.

Senator WEICKER. What happened to all your teeth?

Master SELSER. Well, they got lost somewhere. [Laughter.]

Dr. COLWELL. We thought that was very appropriate after all the dental testimony that you just heard.

Senator WEICKER. Thank you very much.

STATEMENT OF JOHN T. FARRAR, M.D., PRESIDENT, DIGESTIVE DISEASE NATIONAL COALITION, AMERICAN GASTROENTEROLOGICAL ASSOCIATION

ACCOMPANIED BY:

LEE SMITH, M.D., AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS

CARMEN BELLINO, AMERICAN LIVER FOUNDATION

STEVEN P. STOWE, M.D., AMERICAN COLLEGE OF GASTROENTEROLOGY

STANLEY B. BENJAMIN, M.D., GEORGETOWN UNIVERSITY HOSPITAL, AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY

DONALD E. WILSON, M.D., CHAIRMAN, NATIONAL DIGESTIVE DISEASES ADVISORY BOARD

Senator HARKIN [presiding]. Next we are calling a panel, if I am not mistaken, of six witnesses, Dr. Lee Smith, the American Society of Colon and Rectal Surgeons, Carmen Bellino, American Liver Foundation, Steven Stowe, American College of Gastroenterology, Donald Wilson, John T. Farrar, and Stanley Benjamin.

I understand that Dr. Farrar——

Dr. FARRAR. I am Dr. Farrar, Mr. Chairman.

I will move the panel along. We will stay within our time, and we appreciate you willingness to have us come as a group since we all agree and we have integrated our testimony.

Senator HARKIN. All right, then, Dr. Farrar, please proceed.

PREPARED STATEMENTS

Before you proceed we will place all the statements in the record at this point and then each can summarize.

[The statements follow:]

STATEMENT OF JOHN T. FARRAR

A. Overall NIH: $7.4 billion in accordance with the Ad Hoc Group for Medical Research Funding.

B. National Institute of Diabetes, Digestive and Kidney Disease: $609 million. This level of funding would provide a modest growth rate for the institute and provide for the stabilization of the centers programs.

C. Digestive Disease Division: $250 million of the institutes funding for the Digestive Disease Division of NIDDK. This level would represent a degree of parity among the institute priorities.

D. Digestive Disease and Nutrition Centers Program: $13.1 million. This level of funding would allow the NIDDK to continue the meritorious Digestive Disease and Nutrition Centers research grants currently being funded, and allow for modest expansion.

E. DD Advisory Board: $350,000. The outstanding efforts of the DD Advisory Board should be funded at a rate very similar to other advisory boards.

F. Epidemiology and Data System: $4.5 million. To support the substantial effort being conducted to establish liver transplant data, endoscopy data, and basic digestive data and information.

G. National Digestive Disease Education and Information Clearinghouse: $500,000. To support the current outstanding efforts to provide education and information to thousands of patients, family members and professionals concerned with diseases of the digestive system.

H. Specific Funding for Training of Research Specialists: $13 million. Allocated specifically to enable the NIDDK to keep our best scientists in academic medicine working on digestive disease problems. The DD division has numerous meritorious applicants, and under current constraints only a few can be funded and no Research Career Development Awards can be funded. This recommendation is consistent with recommendations made by the report submitted to Congress by the National Institute of Diabetes, Digestive and Kidney Diseases.

I am John T. Farrar, a physician and a Professor of Medicine at the Medical College of Virginia. I appear before you as a representative of two organizations, the Digestive Disease National Coalition and the American Gastroenterological Association.

I want to thank you for the privilege of testifying and also for the past support this Committee has given us.

The Digestive Disease National Coalition consists of 23 voluntary and professional organizations representing more than 110,000 members and corresponding members. One of these constituent organizations, the American of Gastroenterological Association is the oldest and the largest medical organization in the United States concerned with digestive diseases.

All of these 23 constituent organizations have joined together in this Coalition for the purpose of improving the quality of care of patients with digestive diseases and those who lack adequate nutrition. In this testimony, when I use the term digestive diseases, I implicitly include nutritional disorders since we consider promoting good nutrition an intrinsic part of our task.

You will hear from several representatives of other constituent members of the Coalition on the needs of patients with specific digestive disorders.

I want to address my remarks to the need for adequate funds for the National Institute for Diabetes and Digestive and Kidney Diseases, and specifically, adequate funds for research and for manpower.

At the outset, let me say that we support the following totals for FY'88;

For the National Institutes of Health - $7.4 billion

For NIDDK - $609 million

Let me focus on two aspects; (1) funds to support research in digestive disease, and (2) funds to support training of talented young people for a research career.

Medicine in this country is the best in the world. This is not because we have some special power as a nation. It is because we as a nation, have developed a tradition of excellence and have invested in research through the National Institutes of Health and invested in excellent medical schools. We must support biomedical research adequately or the quality of medicine will soon suffer. When this occurs and word is abroad in the land that new ideas and theories and new treatments are not important, the best and the brightest young people will not go into medicine and mediocrity will soon ensue.

To support the NIDDK and the research in digestive diseases, we strongly urge that $609 million be appropriated for fiscal year 1988. This funding level will allow for modest expansion of research programs, stabilize the centers projects and, most importantly, will allow the Institute to fund 40% of approved grants.

TRAINING

Mr. Chairman, your subcommittee's report accompanying the fiscal year 1987 appropriations bill requested a report from the NIDDK at NIH on the status of research manpower in digestive diseases. The DDNC and the AGA have had the opportunity to review this report.

As the Institute report states, resources being directed to attract and train necessary numbers of bright young investigators in digestive disease research are not even remotely adequate. Based on the current and projected manpower needs calculated by such authoritative bodies as the National Commission on Digestive Diseases, the National Digestive Disease Advisory Board, the Institute of Medicine of the National Academy of Sciences, the NIDDK is supporting only about one-half of the institutional training grants, post-doctoral fellowships and career awards to adequately meet the research manpower needs in digestive diseases. The situation the last two years was particularly acute. In 1986, there were only 5 career awards made in digestive diseases in contrast to 40 in 1980. We simply must support the research careers of our young investigators or the entire research enterprise will collapse. We strongly urge that $13 million be allocated specifically to the NIDDK for research training in digestive diseases. This is in accord with the report to the Congress by the NIDDK.

Before, I close, let me add a few words of support for two other units of NIDDK, the epidemiology data systems and the Digestive Disease Information and Education Clearinghouse. Central to the scientific community's ability to utilize the knowledge gleaned from their investigative efforts is the establishment and continued support of epidemiology data systems. Such systems will enable us to logically store information on such important subjects as liver transplants, endoscopy and other specific digestive diseases. We must have a reliable storehouse of reliable information.

The Clearinghouse serves a very important function as a means of disseminating the best information on digestive diseases and promoting health education to the public.

I will be pleased to respond to any questions you may have.

STATEMENT OF STANLEY B. BENJAMIN

Mr. Chairman, I am Dr. Stanley B. Benjamin, Chief of Gastroenterology, Georgetown University Hospital, Washington, D. C.

I represent the American Society for Gastrointestinal Endoscopy, an organization of more than 3,000 gastroenterologists and surgeons who specialize in the diagnosis and treatment of diseases of the digestive tract.

As you will see below, we believe that the field of endoscopy is on the verge of a second revolution which will have a profound impact on the treatment of digestive diseases.

However, before I go into the specifics of research advances and that second revolution, I would like to take this occasion to thank you and the members of your Committee for standing strongly opposed to the proposed Office of Management and Budget cutbacks for fiscal year 1987, which would have caused the funding for the National Institutes of Health to be reduced, and carried over for expenditure in fiscal year 1988. All of us concerned with biomedical research, and specifically research in endoscopy, are deeply grateful to you for that.

Also, before we talk about research advances, we would like to indicate that we support the National Digestive Diseases Coalition request for funding in the several areas, including research training.

We also believe, as the Coalition indicates, that the National Institute of Diabetes and Digestive and Kidney Diseases should receive funding at the level of $607 million for fiscal year 1988.

We also support the Ad Hoc Group for Medical Research Funding figure of $7.6 billion for the NIH, and included in that funding level are necessary funds for construction and research instrumentation.

The Second Revolution in Endoscopy

In the last several years we have brought to you information about the rapid expansion of the use of fiberoptics in gastroenterology. Fiberoptics and the development of the flexible endoscope have resulted in dramatic and measurable benefits in the quality of care provided to our patients. Step by step, additionally, funding from the National Institutes of Health has helped both in the development of equipment and in research studies in their use.

You may find useful an example of the advantages to patients in the use of the endoscope. We have heard a lot about colon cancer recently, especially as it has impacted on the highest levels of our political leadership. You may know, Mr. Chairman, that 135,000 cases of colon cancer are found in Americans every year.

We now know, as it has been clearly shown in a number of studies, that the use of fiberoptic endoscopes, which help us to find and remove precancerous polyps, and which removal prevents the development of colon cancer at the site, have produced extraordinary lessening of pain, suffering and death, and medical care costs. Endoscopy has permitted early diagnosis of other gastrointestinal diseases, and it has helped us to develop outpatient management of conditions previously requiring hospitalization (like the removal of colon polyps).

As indicated above, representatives of the American Society for Gastrointestinal Endoscopy have discussed with you the improvements and modifications over the years of this technology, which have expanded the opportunity for improved patient care. It was, then, fiberoptics which permitted us to have this first technologic revolution in the care of patients.

We believe we are now on the verge of another technological revolution of equal or greater magnitude.

As an outgrowth of the miniaturization associated with the development of microchip technology, a new form of endoscopy has come forward, called video-endoscopy. Chip cameras have been developed which allow them to be placed the end of flexible endoscopes. These chips allow precise visualization of any area the endoscope can reach. I have for your examination now one of the older endoscopes, and one of the newer endoscopes showing you the small area where the chip is placed for video endoscopy. I also show you examples by means of color photos the visualization obtained through the older endoscope, and through the new video endoscope. By itself this improved image, shown here, would seem to be simply another way of viewing the gastrointestinal tract. However, there is much more to it than that. The next revolution in endoscopy will be brought about by the marriage of this new technology and the outgrowth of improvements in digital scanning and the monitoring of energies outside the visible spectrum.

Much of the research in the medical use of electromagnetic energy outside the visible spectrum is undergirded by discoveries made by resaerch funded through the National Institutes of Health. Briefly stated the research efforts attempt to use electromagnetic energies near visible light (e.g., infrared) to diagnoses (in vivo spectrophotometry) and potentially treat (infrared laser) diseases at an early stage when they could not be otherwise detected. Infrared energy is the basis for thermography, which is often used to diagnose early malignancies or infectious diseases on the body surface. The advent of the chip camera will potentially allow a marriage of these technologies, if funding is available to continue these developments.

A digitalized signal allows for precise measurement and duplication of images obtained from the chip camera. This cannot be effectively achieved with current fiberoptic instruments due to the limited number of data points brought back through the individual fibers. With the chip cameras allowing 4-6 times the earlier number of data points for each image, a permanent analyzable record of details in the gastrointestinal tract is possible. It is analogous to the resource mapping technology used to find natural resources on or under the earth's surface and to monitor farming production and problems.

This technology by itself would allow for precise "mapping" of the gastrointestinal tract, strict reproducible definition of disease, and objective measurements of diseases like ulcers and tumors.

The marriage of video endoscopy, utilization of electromagnetic energies in and out of the visible spectrum, and digitalized signals promise to begin this second revolution in gastroenterology. Conceivably in our grasp would be early and precise diagnosis of diseases of the gastrointestinal mucosa, defining cancer before it is visible to the eye, precisely defining diseases, and potentially allowing new therapies in an area where they are sorely needed, given the major morbidity and mortality from gastrointestinal disease.

Additional advances in the realm of gastrointestinal endoscopy are related to the introduction of ultrasonography to the gastrointestinal tract, to new balloon technologies allowing access to the liver and pancreas and the ongoing efforts to miniaturize fiberoptic instruments for use in the liver and pancreas.

This complex development of technologies and medicine is deeply intertwined with the National Institutes of Health research programs which help develop and often fund these very important and exciting developments.

Mr. Chairman, we deeply appreciate your attention and the support that you have given to research in gastrointestinal endoscopy.

I would be pleased to answer any questions you may have.

STATEMENT OF LEE SMITH

Mr. Chairman and Members of the Subcommittee, I am Dr. Lee Smith, a Professor of Surgery and Director of the Colon and Rectal Surgery Division at the George Washington University Medical Center. The American Society of Colon and Rectal Surgeons is very pleased to have this opportunity to appear before you.

A combination of aesthetic and cultural factors have kept doctors, patients, the lay public, and legislators from openly discussing and acknowledging that anorectal diseases and disorders exist and deserve special attention. For example, in a survey of public perceptions, 63% of workers could discuss chest pain, but only 29% could discuss the taboo of constipation; 47% could talk about coughing up blood, but only 28% could mention rectal bleeding.

Anorectal diseases do not always kill, but the disability and economic losses associated with these diseases are significant. Here are some facts I would like you to consider:

* Among elderly patients in acute, geriatric, and psychiatric wards, fecal incontinence occurred in 13, 26 and 31 percent respectively. Incontinence is felt to be a stigma and a social disgrace to the degree that elderly patients often end up in nursing homes because of this disease. Feelings of shame prevent patients from revealing this disability; thus, the full extent of this dehumanizing problem is not recognized.

* The National Center for Health Statistics reported 180,000 admissions for hemorrhoid treatments in 1974. The inpatient Hospital Claim File of the Medicare Statistical System reveals that hemorrhoids rank among the top eight digestive diseases. The 1980 hospital cost for hemorrhoid disease alone exceeded $196,000,000.

- Across-the-counter items for self treatment of anorectal disorders occupy large areas on drug store shelves and attest both to the magnitude of the problem and to the great economic investment.

Awards for anorectal research from the National Institutes of Health (NIH) have been few, and the grants supported in fiscal year 1986 were only three. The American Society of Colon and Rectal Surgeons recommends that Congress demonstrate support for anorectal research by providing resources specifically intended for this important disease category:

- The National Digestive Disease Advisory Board, within the National Institute of Diabetes, Digestive, and Kidney Diseases (NIDDK), should be called on to formulate a long-range plan for studying anorectal disease.

- The National Center for Health Statistics should formulate specific questions on physical examinations to define the extent of anorectal disorders.

- Adequate resources should be provided to NIDDK for funding three to four major research projects.

- Epidemiologic studies, which are costly, should be initiated at a level sufficient to adequately compile quality data.

- Research training and career development awards should be encouraged. Four trainees or fellowships (through the National Research Award Program) should be established, and two clinical investigator awards should be provided.

- A public education and information dissemination program, aimed at professionals and patients should be created.

In subsequent years, the level of funding should be based on recommendations which are, in turn, based upon the long range plan established by the DD Advisory Board.

Mr. Chairman, thank you for the opportunity to advise your Subcommittee on anorectal disease research. Clearly, much more needs to be done in this area, but frequently this is not an easy subject to discuss among professionals or patients. We urge your Subcommittee to help us set the tone for enhanced research and training in anorectal disease.

I am pleased to respond to any questions you have.

STATEMENT OF CARMEN BELLINO

Good morning Senator Chiles and members of the subcommittee. I am Carmen Bellino representing the American Liver Foundation.

For the last five years, my whole life has been dominated by my liver disease. Its name is probably unfamiliar to you. Sclerosing cholangitis. It's not exactly a household term. In fact, even though I had worked as a pharmacist for 19 years, I didn't know anything about this disease when the doctors finally made the diagnosis. That took time, because most doctors are not familiar with some of the less common liver diseases.

In April 1982 I went to the hospital for routine gallbladder surgery. Five months later I became extremely jaundiced and returned for more surgery for bile duct obstruction. They suspected, cancer. I was grateful at the time that they were wrong on that count. Since then I have learned that liver disease can be just as serious.

The following month I was readmitted to the hospital with a severe infection requiring more surgery. At this time the diagnosis of sclerosing cholangitis was confirmed. Since then I have been to the doctors almost every week. I have been an outpatient at least 50-60 times, and have been hospitalized 25 times.

I haven't been able to work since September 1982. My medical bills add up to more than $200,000. And now I need to make a decision about a liver transplant. It's not only a major operation, but a very stressful one. Liver transplants are much more successful today than they were just a few years ago. The overall survival rate is about 70-75%. But that means that about one out of four don't make it. So it's still a very risky procedure. It's also an expensive one. The average cost is about $150,000 and it could go higher. You also need to take medication to prevent rejection of the transplanted liver and that costs about $6,000 a year for the rest of your life.

My illness isn't something that affects just one person. It's changed the lives of my wife and our three daughters. We have ten-year-old twins and a 13-year-old. All of us are involved in this difficult decision.

One thing we have all learned over the past five years is that there is a tremendous need for more research into liver diseases so that we have more effective treatments and cures. Liver diseases can be as devastating to patients and their families as cancer, but very little has been invested in research on the liver. While some liver diseases, like mine, are relatively rare, there are more than 25 million people in this country who suffer from liver and gallbladder diseases. Knowledge that is gained about the liver has the potential to benefit all of them -- and their families. Since the liver is one of the most vital organs in the body, and the most chemically complex, the knowledge gained from studying its functions could even lead to progress in fighting other catastrophic diseases.

I have come here today not only to tell you one man's story, but to ask you to support medical research on liver diseases so that some day in the future other people will not have to go through what my family and I are struggling with now.

The American Liver Foundation supports the following funding recommendations for FY 1988:

o Overall NIH	$7.4 billion
o NIDDK	$609 million
o DD Division	$250 million
o DD & Nutrition Centers Program	$13.1 million
o DD Advisory Board	$350,000
o Epidemiology and Data System	$4.5 million
o National DD Education and Information Clearinghouse	$500,000
o Specific Funding for Training Research Specialists	$13 million

Thank you for giving me this opportunity to share our causes with you.

Statement of Stephen P. Stowe

Mr. Chairman and Members of the Subcommittee, I am Stephen Stowe, member of the Patient Care Committee of the American College of Gastroenterology and a member of the National Affairs Committee of the American College of Gastroenterology and recently have been a member of the Board of Trustees for the American College of Gastroenterology. I am in private practice, treating digestive diseases and actively involved in teaching at the University of Rochester School of Medicine and actively doing research in the epidemiology of Inflammatory Bowel Disease.

The American College of Gastroenterology has a deep commitment to clinical and basic research and its subsequent application to the treatment and care of patients ill with gastrointestinal disease.

Digestive diseases are responsible for more Americans being hospitalized than any other illness and cause yearly expenditures of more than 17 billion dollars in direct health care costs and a total annual economic burden of nearly 50 billion dollars.

Mr. Chairman, clinical gastroenterology has been revolutionized through research efforts led by NIH. Practice today has advanced beyond the wildest fantasy of a gastroenterologist practicing 40 years ago. The role of the NIH in causing this miracle can not be overestimated. It has been part of almost every, if not every, important advance in my field.

Today, I would like to spend my portion of the time outlining some of the recent clinical advances that have been made which have a profound impact on the practice of gastroenterology, the result of basic research, much of it through NIH.

The initiation of cholesterol gall stone formation has been demonstrated by video-enhanced microscopy to be nucleation that leads to cholesterol crystal growth. Using bile obtained via nasal catheter, differences in nucleation can be detected, indicating the higher risk population for which preventive measures can be exercised--a major advance in control of cholesterol gall stone formation.

Non-surgical methods to dissolve cholesterol gall stones with a solvent instilled directly into the gall bladder, independently or following fragmentation by shock wave therapy have proven highly successful. In addition to reducing the risk of surgery, an estimated $2.5 billion cost of surgically removing gall bladder stones can be reduced greatly.

The mechanism of diarrhea due to parasites has been traced to the interaction between an intestinal enzyme and a protein in the parasite. One of the more common parasites which has been thoroughly studied is Giardia Lamblia. Understanding the attachment process of the parasite to the intestinal diseases is important.

Peptic Ulcer formation is being investigated by the focusing of researchers on the relation of gastric ulcers and neuropeptides, proteins which are found in the central nervous and digestive systems. Investigators have discovered that stressed animals produce more neuropeptides indicating an important link between psychogenic factors and ulcer formation.

Hemorrhage from gastric and/or duodenal ulcers is a life-threatening problem. Continued and/or reoccurring bleeding in the past has required surgical intervention. The introduction of new methods employing a flexible fiberoptic endoscope to locate the bleeding site and then selectively utilizing one of several techniques to stop the bleeding has revolutionized the management of hemorrhage complicating peptic ulcers. The choice of special technical instrumentation can be made from Monopolar Electrocogulation; the application of Laser Photocogulation; the use of Bipolar Electrode Probe (BICAP) which, by coagulating the bleeding point will control the hemorrhage; employment of a Heater Probe which includes a computer-controlled power supply that is effective in producing arterial coagulation. The cost benefit analysis has shown fifty percent cost reduction by use of endoscopic modalities compared to surgery. Moreover, surgical intervention requires a longer recovery time, is associated with greater incidence of post-operative morbidity and mortality, and a greater loss of time from work.

Carcinoma of the colon and rectum is the second most common cancer in the United States. It will begin in a benign colon polyp, and by malignant degeneration terminate in cancer. Early recognition of the colonic polyp and prompt endoscopic removal will prevent the development of the carcinoma. Fiberoptic colonscopy has made possible the reduction in incidence of colon and rectal carcinoma, avoided extended hospitalization, eliminated significant morbidity and mortality and impressively reduced over-all costs. In the presence of existing advanced colon carcinoma, a new type of adjuvant treatment, in the form of the Laser, is applied in selected patients to replace palliative surgery by preventing and/or controlling hemorrhage, relief of obstruction and removing the primary tumor in patients who are elderly, debilitated or have serious underlying medical conditions.

A new method has been created for reliable, safe and early diagnosis of impaired blood supply to the intestine. Vascular occlusion can have serious consequences such as gangrene, perforation and death if not recognized early. A radioisotope administered in the abdominal cavity, diffuses into the intestine. It is rapidly removed from the intestinal tract where the blood supply is adequate, but preferentially retained in segments of the bowel where the blood supply has been compromised.

One of the ten disabling diseases of the intestinal tract is inflammatory bowel disease which includes Crohn's disease and Chronic Ulcerative Colitis. More than two million Americans suffer from these chronic inflammatory disorders of the small and/or large bowel. Recent research shows these diseases are occuring more frequently and especially in those over 65 years old. IBD is characterized by bloody diarrhea, abdominal pain, anemia and malnutrition. By virtue of these intensive efforts, NIDDK-supported scientists have discovered agents active in the inflammatory process. Two groups of compounds, prostaglandins and leukotrines are manufactured in the body and play a role in mediating inflammation. With this new discovery, direction is provided for the development of therapy that is believed will counter the effects of the two substances. Continued investigative efforts of understanding the treatment for inflammatory bowel disease has made possible a reduction in the mortality due to illness. In 1960 over three thousand Americans died from inflammatory bowel disease. The most recent figures show that the mortality is well below 800 annually, this inspite of the rising frequency of the diseases.

My research in Rochester, NY has studied IBD 1940-1986, and reflects the lesser mortality and morbidity which are a part of the improved medical and surgical therapy - a gift from the research efforts. Most importantly, from the patient's standpoint, because of the research efforts, these diseases are no longer considered closet diseases and there is hope for improvement and eventually a cure.

Cirrhosis is the liver disease that leads to liver failure and death. On the road to liver failure, one of the most dreaded complications of cirrhosis is hemorrhage from perforation of dilated veins that develop in the esophagus. Emergency treatment, which has proven to be highly successful in stopping the acute bleeding episode, is obtained by injection of a coagulating agent into the dilated veins with the production of a clot and subsequent control of the bleeding. This relatively new form of treatment buys the patient more time, enabling a more thorough evaluation to be carried out to determine what plans for lasting benefits might be provided. Not infrequently the injection of a coagulating agent will prove adequate without additional treatment. One of the other complications of cirrhosis is liver failure which is manifest by drowsiness and coma due to hepatic encephalopathy. The administration of branched chain amino acids has proven successful in ameliorating the encephalopathy.

Liver transplant has moved into a recognized form of treatment of liver diseases due to selected causes. With the better understanding of the proper case selection and the better treatment of complications following liver transplantation, the survival following this dramatic procedure has increased to 80 percent.

Mr. Chairman, these are just a few of the important advances that have come to bear fruit in recent years. In FY'88 the National Diabetes and Digestive, and Kidney Disease Institute will require an adequate amount of funding to continue to forge this path of accomplishment and expertise.

The recently established Digestive Disease Research Centers Program has been exceptional. Investigators are conducting various key gastrointestinal research efforts through these Centers of Excellence that are located in various medical facilities throughout the country. The National Digestive Disease Advisory Board has identified pancreatic disorders and pediatric digestive diseases as two additional areas requiring intensive research. We urge your subcommittee to make every effort to provide funding for maintenance of the current Centers activity, while allowing for these two additional centers. Further, the American College of Gastroenterology would like to recommend adequate funding for 6 clinical nutrition research units; one more than the current 5.

The American College of Gastroenterology has for many years stressed the continuing need to insure an abundant supply of clinical and basic biomedical researchers. This supply has been severely threatened by a dwindling of NIH resources needed to attract bright young people to research careers. Given the growing aging population of the nation that suffers a disproportionately high percentage of serious digestive diseases, an effort to enhance our national pool of young investigators should be top priority. Further, as outlined in the report recently developed by NIDDK, and submitted to your Committee, an aggressive approach to recruiting, training and retaining young, bright investigators is advisable before the number of those interested in pursuing careers in digestive disease research further deteriorate to a level that inhibits much begged for advances.

The documentation and collection of data related to gastrointestinal illness is paramount in the investigative community's efforts to recognize genetic, environmental, emotional, and dietary causes of digestive diseases. The American College of Gastroenterology vigorously applauds the Digestive Disease Division of NIDDK for its recent efforts to collect and store this data, and would like to urge the subcommittee to continue support for this critical program.

This concludes my testimony Mr. Chairman. I am pleased to respond to any questions you may have.

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E. DD Advisory Board: $350,000. The outstanding efforts of the DD Advisory Board should be funded at a rate very similar to other advisory boards.

F. Epidemiology and Data System: $4.5 million. To support the substantial effort being conducted to establish liver transplant data, endoscopy data, and basic digestive data and information.

G. National Digestive Disease Education and Information Clearinghouse: $500,000. To support the current outstanding efforts to provide education and information to thousands of patients, family members and professionals concerned with diseases of the digestive system.

H. Specific Funding for Training of Research Specialists: $13 million. Allocated specifically to enable the NIDDK to keep our best scientists in academic medicine working on digestive disease problems. The DD division has numerous meritorious applicants, and under current constraints only a few can be funded and no Research Career Development Awards can be funded. This recommendation is consistent with recommendations made by the report submitted to Congress by the National Institute of Diabetes, Digestive and Kidney Diseases.

STATEMENT OF DONALD E. WILSON

I am Dr. Donald E. Wilson, Chairman, Department of Medicine, SUNY Health Science Center in Brooklyn, New York, and Chairman of the National Digestive Diseases Advisory Board. I am pleased to have the opportunity to speak to you about current accomplishments, opportunities and needs in digestive diseases research.

Congress established the National Digestive Diseases Advisory Board to:

(1) Review and evaluate the implementation of the long-range plan formulated by the National Commission on Digestive Diseases in 1979, and (2) Report annually to the Congress and the Secretary of Health and Human Services with recommendations for future policies, programs and budgetary requirements related to digestive diseases. In this year's written report, we have updated the Commission's long-range plan and, where appropriate, made new recommendations in specific areas. I would like to focus my remarks on several areas of concern and need.

Digestive diseases range from serious, sometimes life-threatening, illnesses such as cirrhosis of the liver, inflammatory bowel disease, peptic ulcer disease, cystic fibrosis and cancer to more common but important conditions such as gallstones, heartburn, diarrhea and hemorrhoids. It is estimated that over one-half of the U.S. population will be affected by digestive disorders at some time during their lives at a cost to the Nation of more than $50 billion each year. Medical costs alone now total $17 billion annually. Digestive diseases cause approximately 200,000 deaths each year (including those deaths associated with malignancies).

Of all the causes of disability due to illness in the United States, digestive diseases rank second and account for 10 percent of the total economic burden of illness in this country. More Americans are hospitalized for digestive diseases than for any other family of illnesses. These disorders are responsible for almost 15 percent of all admissions to general hospitals and for 25 percent of all surgical procedures (excluding tonsillectomies). Digestive diseases account for 200,000 absences from work each day and are the leading cause of loss of time from work for male employees.

Despite these rather bleak statistics, exciting advances in biomedical research have expanded our understanding of the pathogenesis of several digestive diseases and our ability to treat many of them. For example, research on peptic ulcer disease has resulted in the development of several types of new drugs providing us with more effective medical therapy, dramatically reducing the need for surgery in this disorder. Studies directed to gallstones have provided two non-surgical approaches to treating gallstones and further understanding about the formation of stones, increasing the possibility of gallstone prevention in the future. Increased diagnostic screening for colonic cancer and developments in cell biology that provide new information about the initiation of infectious diseases of the gastrointestinal tract are additional examples of our new knowledge about digestive diseases.

DIGESTIVE DISEASE CENTERS

NIDDK supports 12 Digestive Disease Research Centers in the areas of liver disease and gastrointestinal secretion, absorption, motility and inflammation. These centers provide shared (core) research facilities and resources that expand and improve the effectiveness of digestive diseases research and facilitate collaboration among many investigators. The centers also provide an effective setting for training young scientists in the methods and understanding of basic and clinical research.

Unfortunately, the budget of each center has been significantly reduced in the past two years because of the general budget constraints experienced by the NIDDK. These unexpected reductions seriously restrict current research programs, interfere with long-term planning and recruitment and undermine the ability of the centers to accomplish the tasks for which they were originally approved and funded.

THE BOARD RECOMMENDS THAT $8.7 MILLION IN FUNDING BE MADE AVAILABLE TO THE NIDDK IN FISCAL YEAR 1988 TO SUPPORT THE 12 DIGESTIVE DISEASE RESEARCH CENTERS AT RECOMMENDED BUDGET LEVELS.

INDIVIDUAL RESEARCH GRANTS AND TRAINING

Federal expenditures in other areas of digestive diseases research also concern the Advisory Board. A major issue is the steady decline in the percentage of approved individual research grants funded by NIDDK from about 45 percent a few years ago to just 25 percent in 1985. As a result, outstanding research programs are terminated prematurely, and promising new investigators are unable to obtain support for their projects.

THE BOARD THEREFORE STRONGLY RECOMMENDS THAT THE NIDDK RECEIVE SUFFICIENT RESOURCES TO FUND AT LEAST 40 PERCENT OF COMPETING INDIVIDUAL RESEARCH GRANTS AT BUDGET LEVELS RECOMMENDED BY THE REVIEW COMMITTEES.

It is critical that the number of investigators trained to apply modern research skills and techniques to the complex problems of digestive diseases be increased. Bright young scientists have become discouraged both by the reduction in the percentage of approved research applications that can be supported within current funding levels and by the limited number of training and development awards.

THE BOARD RECOMMENDS THAT $8.7 MILLION BE MADE AVAILABLE TO THE NIDDK IN FISCAL YEAR 1988 TO EXPAND TRAINING AND CAREER DEVELOPMENT OPPORTUNITIES IN DIGESTIVE DISEASES RESEARCH.

The Board believes that there is a great need for these awards, specifically in the area of nutrition, which is a key factor in many digestive diseases. Significant advances in nutrition research have occurred that should be incorporated into medical teaching programs to facilitate transferring this knowledge to digestive disease patients. Therefore, the Advisory Board recommends the establishment of Nutrition Academic Awards to: (1) Provide a stimulus for development of nutrition curriculums in schools lacking them, and (2) Strengthen and improve existing nutrition curricula.

THE BOARD RECOMMENDS THAT NIDDK RECEIVE AN ADDITIONAL $375,000 TO FUND FIVE NUTRITION ACADEMIC AWARDS ANNUALLY. THESE FUNDS SHOULD BE IN ADDITION TO THE NIDDK'S EXISTING BUDGET FOR RESEARCH TRAINING AND CAREER DEVELOPMENT AWARDS.

EPIDEMIOLOGY

Epidemiologic studies to compile data on the dimension and scope of the impact of digestive diseases and the outcome of interventions are critical to the planning of policies for the control of digestive diseases. The information necessary to develop a comprehensive picture of the prevalence and impact of these disorders is not yet available. Such studies have been hindered by the inadequate number of professionals trained in epidemiology and related disciplines.

THE BOARD RECOMMENDS THAT THE NIDDK RECEIVE AN ADDITIONAL $350,000 TO SUPPORT FIVE RESEARCH CAREER DEVELOPMENT AWARDS IN THE FIELD OF EPIDEMIOLOGY AND DIGESTIVE DISEASES.

The National Digestive Diseases Data System was established within the NIDDK to collect, analyze, and disseminate epidemiologic data on digestive diseases to guide research and health care delivery policy. The Advisory Board is working with the staff of the data system to prepare a comprehensive review and analysis of available data on the prevalence and impact of digestive diseases in America. Such a resource would be invaluable in assessing the scope of digestive diseases, determining health care delivery policy, and identifying areas of need in research.

TO ACCOMPLISH THIS GOAL, THE BOARD RECOMMENDS THAT CONGRESS PROVIDE $4.5 MILLION TO THE NIDDK FOR THE NATIONAL DIGESTIVE DISEASES DATA SYSTEM.

The Advisory Board is convinced that the support of biomedical research directed at reducing the impact of digestive diseases is a cost-effective investment that will yield considerable return in future years. To permit digestive diseases research to grow at the rate recommended by the Commission, the Board believes that funding for the entire NIDDK must be increased.

THE ADVISORY BOARD RECOMMENDS THAT THE TOTAL NIDDK BUDGET BE INCREASED TO $615 MILLION IN FISCAL YEAR 1988 TO PERMIT THE INSTITUTE TO FUND AT LEAST 40 PERCENT OF COMPETING INDIVIDUAL RESEARCH GRANTS, FUND NONCOMPETING RESEARCH GRANTS AND CENTERS AT RECOMMENDED LEVELS, AND SUPPORT THE OTHER PROGRAMS ADDRESSED IN THIS REPORT.

In addition, the National Institute on Alcohol Abuse and Alcoholism (NIAAA), a unit of the Alcohol, Drug Abuse and Mental Health Administration, provides significant support for research into alcohol-related digestive diseases including inflammation and damage of the esophagus, stomach, pancreas and liver. Two National Alcohol Research Centers have a substantial foundation in digestive diseases research. The Board recommends that the NIAAA receive additional funds to expand its digestive disease-related research and training programs.

Thank you for the privilege of appearing before your subcommittee. I will be pleased to respond to any questions you may have.

Dr. FARRAR. I am John Farrar, a physician and a professor of medicine at the Medical College of Virginia in Richmond. I appear before you as a representative of two organizations, the Digestive Disease National Coalition [DDNC], a coalition of 23 voluntary and medical organizations, and the American Gastroenterological Association [AGA].

You will hear from several representatives of other constituent members of the coalition on this panel on the needs of patients with specific digestive disorders. I have submitted a written copy of my testimony and I want to address my oral remarks to the need for adequate funds for the National Institute of Diabetes and Digestive and Kidney Diseases, and specifically adequate funds for research and for manpower. At the outset, let me say we support the following totals for fiscal year 1988. For the National Institutes of Health, $7.45 billion. For the NIDDK, $609 million. Let me focus on two aspects, the funds to support research in digestive disease, and two, funds to support training of talented young people for a research career.

Medicine in this country is the best in the world. This is not because we have some special power as a nation. It is because we as a nation have developed a tradition of excellence, have invested in research through the National Institutes of Health and invested in excellent medical schools.

We must support biomedical research adequately or the quality of medicine will soon suffer. When this occurs and word is abroad in the land that new ideas and new theories and new treatments are not important, the best and the brightest young people will not go into medicine, and mediocrity will soon ensue. To support the NIDDK and research into digestive disease, we strongly urge that $609 million be appropriated for fiscal year 1988. This funding level will allow for modest expansion of research programs, stabilize the center's projects, and most importantly, will allow the Institute to fund 40 percent of the approved grants. That is a very important figure.

Mr. Chairman, your subcommittee's report accompanying fiscal year 1987 appropriations bill requested a report from NIDDK at the NICH on the status of research manpower in digestive diseases. The DDNC and the AGA have had the opportunity to review this report. As the Institute report states, resources being directed to attract and train necessary numbers of bright young investigators in digestive disease research are not even remotely adequate. Based on the current and projected manpower needs calculated by such authoritative bodies as the advisory board of the Institute of Medicine, the National Commission, the NIDDK is supporting only about one-half of institutional training grants, post-doctoral fellowships, and career awards to adequately meet the research manpower needs in digestive disease.

The situation in the last 2 years was particularly acute. In 1986 there were only 5 career awards made in digestive diseases, in contrast to 40 in 1980. We simply must support the research careers of our young investigators or the entire research enterprise will collapse. We strongly urge that the $13 million be allocated specifically to the NIDDK for research training in digestive diseases. This is in accord with the report to Congress by NIDDK.

Senator HARKIN. How much did you say?

Dr. FARRAR. $13 million for digestive disease research training.

Senator HARKIN. Research training.

Dr. FARRAR. That is just training of people in postdoctoral fellowships, training grants, and career awards.

Senator HARKIN. Can you give me some idea? I do not have a figure like that in front of me except in your testimony as to what we are spending now on that. Do you have any——

Dr. FARRAR. Last year there was so little, even though the NIH got a good grant, that very little went to training, and it is not clear to me exactly why that was, and——

Senator HARKIN. Do you know how much?

Dr. FARRAR. Dr. Wilson tells me $1 million.

Senator HARKIN. But you are asking for $13 full million?

Dr. FARRAR. $13 million. We only were able to give five career awards all last year, and five career awards, there just will not be any digestive disease research done.

Senator HARKIN. We had $242 million total for training, and you are saying only $1 million went for——

Dr. FARRAR. I am talking primarily career development awards.

Senator HARKIN. Oh, I see, $89 went for career development, and you got $1 million of that for NIDDK?

Dr. FARRAR. Yes.

Senator HARKIN. OK.

Dr. FARRAR. My pitch really is adequate funds for research and adequate funds for training in digestive disease.

Senator HARKIN. OK. I just had not seen that figure. Go ahead. I am sorry.

Dr. FARRAR. That completes my testimony. Thank you for giving me the opportunity to express the wishes of my two organizations, and I would now like to ask Dr. Stanley Benjamin to continue.

STATEMENT OF STANLEY BENJAMIN

Dr. BENJAMIN. Good morning. My name is Stanley Benjamin. I am currently at Georgetown University, and I represent the American Society of Gastrointestinal Endoscopy. Its 3,000 members are comprised of internists and some subspecializing in GI and surgeons who also practice the subspecialty of clinical gastroenterology, and we are known for wielding our endoscopes.

What I would like to review with you in the brief time that I have, aside from supporting the recommendations of Dr. Farrar, we would like to give you both a success story on behalf of research, which combines previous NIH funding and space technology, and a great opportunity. There are approximately 135,000 cases of colon cancer in this country per year, which have really not changed their treatment in the last 5 years.

What is important is that early diagnosis allows a 85 percent 5-year survival of these patients, and this combination of previously funded research and space technology, space satellite technology have led to the development of some new pieces of equipment which I would like to take this opportunity to show you.

This equipment, the video endoscope, replaces the standard fiber instruments that we all have become very familiar with in light of certain high political members who have had them used on them. The video endoscope uses a chip camera which has as its major benefit the ability to give us very, very high resolution pictures of the GI tract. Now, why is that important? It is important because hopefully we can diagnose these diseases of both colon and the remainder of the GI tract in an early state and deliver highly cost effective early treatment of these diseases that would otherwise be fatal.

With the Chair's permission I would like to show you the end of this instrument and also an example of the kind of resolution pictures we can get with this technology.

Senator HARKIN. I would like to see that.

[Pause.]

Dr. BENJAMIN. The development of this, the chips will be reduced by 50 percent hopefully within a year and instruments will become smaller and hopefully less painful. I think the perception of having your GI tract manipulated will not change.

On behalf of the American Society of Gastrointestinal Endoscopy I would like to thank you for your attention.

Senator HARKIN. Thank you for that testimony. We appreciate it.

Dr. FARRAR. Next I would like to call Dr. Lee Smith.

STATEMENT OF LEE SMITH

Dr. SMITH. Thank you. Mr. Chairman, I am professor of surgery and director of the Division of Colon and Rectal Surgery at George Washington University. Today I am here as a respresentative of the American Society of Colon and Rectal Surgeons.

I think there has never been a group here to address you who specifically came before you as an advocate of research regarding the anus and rectum. Why? A combination of esthetic and cultural factors have kept doctors, patients, the lay public, and legislators, you up there, from openly discussing, acknowledging that anorectal diseases exist and it deserves some special attention.

In looking at a survey of public perspections, people are able to talk reasonably about chest pain and coughing up blood, but they are not willing to talk about constipation, rectal bleeding, those sorts of disorders.

Anorectal diseases do not kill necessarily, but disability and economic losses associated with these diseases are significant. Here are some facts I would like you to pay attention to. Incontinence, especially fecal incontinence, is the fastest ticket for an elderly patient to go to a nursing home.

In one survey elderly patients in an acute care ward were found to have fecal incontinence at the rate of about 13 percent of the patients. In geriatric wards, something like over 25 percent fecal incontinence, and in the psychiatric ward over 30 percent. In some surveys it is even higher, and in combination with urinary incontinence it is over one-half.

Feelings of shame prevent patients from revealing this sort of a disability, and the full extent of this dehumanizing problem really isn't known. Often they end up wearing devices such as one of these here, I'll show you. This is a belt diaper. This is a device here that is the stick-on device for sticking up into the paraneum again to collect the fecal matter.

These are not answers. These are bandaids, if you would, for a problem. We don't understand the——

Senator HARKIN. These are things you can buy in the drug store?

Dr. SMITH. They are bought in the drug store, right.

On another scale much more mundane disorder, say, hemorrhoids, major economic problems. Almost $200 million were spent in hospital costs in 1980. A trip to the drug store will give you some idea about the problem. If you look at the shelves at the drug store, you will see large numbers of medications for constipation, something on the order of $200 million—over $200 million a year on laxatives. The medications for hemorrhoids are remarkably large numbers.

Probably sometime during your lifetime one-half of the people in this country will have some disorder of the inter-rectum. What might you do? I would like you to think about this a moment. What might you do?

I have listed on this paper, and you will see there are six points which I am not going to enumerate, but six points which have to do with a long range plan the National Digestive Disease Advisory Board might make; that the National Center for Health Statistics might do a survey to find better what the extent of these problems really are; that several projects, even just three or four good projects per year might be instituted. Epidemiologic studies, what really causes this? Where do they date back to? And that some research and training and career development awards be instituted. And, even just as important, that public education be promoted and disseminated.

In subsequent years funding of some variety should be based upon recommendations from the National Digestive Disease Advisory Board, who I hope will, with your recommendation, make a long-range plan for these disorders.

Mr. Chairman, thank you for the opportunity to advise your subcommittee on these problems.

Senator HARKIN. You've got my attention. To the best of your knowledge, is anything going on at NIH in this area at all?

Dr. SMITH. There were three grants last year in 1986. I don't know what they were.

Senator HARKIN. In what area, do you know?

Dr. SMITH. I really don't know. I was told there were three grants that were referrably to the area.

Senator HARKIN. You are saying there is not really a focus in any part of NIH on anorectal diseases?

Dr. SMITH. That's right. This specific disorder really has never been looked at.

Senator HARKIN. Do we know in our budget? I don't need to know that right now, but if I can get it later on, how much of NIH's budget last year went for—I guess this would not cover things like colon cancer?

Dr. SMITH. We are talking about benign disorders, things that are not cancer.

Senator HARKIN. I would like to find out. Thank you.

Dr. FARRAR. I would now like to call Mr. Carmen Bellino from the American Liver Foundation.

STATEMENT BY CARMEN BELLINO

Mr. BELLINO. Good morning, Senator and members of the subcommittee. I am Carmen Bellino representing the American Liver Foundation. For the last 5 years my whole life has been dominated by my liver disease. Its name is probably unfamiliar to you, sclerosing cholangitis. It is not exactly a household term. In fact, even though I had worked as a pharmacist for 19 years, I did not know anything about this disease when the doctors finally made the diagnosis. That took time because most doctors are not familiar with some of the less common liver diseases.

In April 1982 I went to the hospital for routine gall bladder surgery. Five months later I became extremely jaundiced and returned for more surgery for bile duct obstruction. They suspected cancer. I was grateful at the time that they were wrong on that count. Since then I have learned that liver disease can be just as serious.

The following month I was readmitted to the hospital with a severe infection requiring more surgery. At this time the diagnosis of sclerosing cholangitis was confirmed. Since then I have been to the doctor almost every week. I have been an out-patient at least 50 to 60 times, and have been hospitalized 25 times. The only why I can maintain my nutrition is by drinking the bile I collect from tubes in my chest connected to my liver.

I have not been able to work since September 1982. My medical bills add up to more than $200,000, and now I need to make a decision about a liver transplant. It is not only a major operation, but a very stressful one. Liver transplants are much more successful today than they were just a few years ago. The overall survival rate is about 70 to 75 percent. That means about one in four do not make it, so it is still a very risky procedure. It is also an expensive one. The average cost is about $150,000 and it could go higher. You also need to take medication to prevent rejection of the transplanted liver and that costs about $6,000 a year for the rest of your life.

My illness is not something that affects just one person. It has changed the lives of my wife and three daughters. We have 10 year old twins and a 13-year-old. All of us are involved in this difficult decision. One thing we have all learned over the past 5 years is that there is a tremendous need for more research into liver diseases so that we may have more effective treatment and cures. Liver diseases can be as devastating to patients and their families as cancer, but very little has been invested on research on the liver.

Some liver diseases like mine are relatively rare. There are more than 25,000,000 people in this country who suffer from liver and gall bladder diseases. Knowledge that is gained about the liver has the potential to benefit all of them and their families. Since the liver is one of the most vital organs in the body and the most chemically complex, the knowledge gained from studying its functions could even lead to progress in fighting other catastrophic diseases.

I came here today not only to tell you one man's story, but to ask you to support medical research on liver diseases so that some day in the future other people will not have to go through what my family and I are struggling with now. Thank you for giving me this opportunity to share our causes with you.

Senator HARKIN. Thank you very much.

Dr. FARRAR. Next I would like to call Dr. Stephen Stowe.

STATEMENT OF DR. STEPHEN P. STOWE

Dr. STOWE. Senator Harkin, my name is Dr. Stephen Stowe. I represent the American College of Gastroenterology. I am in private practice, and for the last 20 years I have taught at the University of Rochester School of Medicine. I have actively been doing research into the cause and epidemioligy of inflammatory bowel disease.

American College of Gastroenterology represents greater than 2,000 physicians specializing in digestive disease care, and it has been committed to clinical and basic research and subsequent application to the treatment and care of patients who are ill with digestive diseases.

I would like to make you aware of the fact that digestive diseases hospitalize more Americans than any other illness and cause a yearly expenditure of $17,000 in direct health care cost and a total annual economic burden of nearly $50 billion.

I would like to review for you a short list of the successes we have had with the current research at NIH, things that have given me as a clinician more that I can do for a patient. For gall bladder disease, we now understand more about the cause in causing gall bladder stones to form and now we have a better understanding that they are caused by a nucleus that adds to cholesterol growth.

In addition to that, we find the higher risk populations, and we are now able, through endoscopic procedures, to understand better how to remove them; certain things such as disolving gall stones with certain solvants, using shockwave therapy have proven successful. We may then soon see a reduction in the $2.5 billion cost for surgically removing gall stones.

We understand about the parasitic involvement with the gastrointestinal [GI] tract by understanding that a certain intestinal enzyme and protein in the parasite are the basic linkage.

Peptic ulcer has had great breakthroughs in the last 10 years. We now understand better about neuropeptides and their link with causing stress and peptic ulcer.

As was described before, endoscopy and its advances directly apply to peptic ulcer because now we can stop acute GI bleeding by such things as laser therapy, bipolar electrodes and heater probe directly applied through the endoscope to the bleeding blood vessel. This gives us the ability to medically treat with endoscopy rather than surgically have to make major resections in the upper GI tract in many patients who have upper GI bleeding.

Dr. Benjamin has mentioned to you about his breakthroughs with colon cancer and early detection of polyps. Removal of those polyps decreases the frequency of cancer. We now understand much better about inflammatory bowel disease. Inflammatory bowel disease occurs in 2,000,000 Americans and is a major source of morbidity in the United States.

In Rochester, our own epidemiologic survey shows that we spend more on hospitalizing inflammatory bowel disease than caring surgically for gall stones or appendicitis. We find that in 1960, the data showed approximately 3,000 Americans died of inflammatory bowel disease. Now we are happy to say that in the last year approximately 800 persons died of inflammatory bowel disease with direct application of clinical care through the research endeavors and understanding what causes inflammatory bowel disease.

NIH has worked and found two intermediary compounds, prostaglandins and leukotrines, that seem to be active in the inflammatory response, inflammatory bowel disease.

Cirrhosis of the liver, as was mentioned, is a major impact on U.S. health care. We are able now to treat hepatic encephalopathy, and we are able to treat with branched chain amino acids.

With no funding there is no progress in research. We are asking for three things. We are asking to reinforce what we have done so well with the digestive disease research centers and asked two additional areas, one in pediatric GI, and one in pancreatic disorders.

Additionally, we are asking more funds for supply of clinical and basic biomedical researchers. With no funds come no progress.

Last, we are asking for reinforcing of the new budget for the epidemiologic data center. As you yourself, Senator Harkin, recognized the dietary impact, we recognize that dietary factors are a major source of many of the GI disorders. Research in epidemiology of diet and impact on that will give us new direction to prevent disease.

This concludes my testimony. I will be glad to answer any questions.

Senator HARKIN. How much research is being done on the linkage between diet and disorders of the GI tract?

Dr. FARRAR. I think there is increasing cooperation between the various groups that are trying to improve the diet of the American people. Our coalition represents several groups. In the written testimony I have said that we consider good nutrition a part of the task of gastroenterologists. It is an important part of our task, and there is a lot of work being done now with increasing fiber. It is important both in cancer and in heart disease and diverticulosis. This is an important part of the charge of all of us on the panel.

Lastly, I would like to introduce Dr. Donald Wilson.

STATEMENT BY DR. DONALD E. WILSON

Dr. WILSON. Mr. Chairman, I am professor and chairman of the Department of Medicine at the State University of New York Health Science Center in Brooklyn, and I am also chairman of the National Digestive Diseases Advisory Bord.

As you know, Congress established the National Digestive Diseases Advisory Board in 1980 to, No. 1, review and evaluate the implementation of the long-range plan formulated by the National Commission on Digestive Diseases in 1979; and, second, to report annually to the Congress and the Secretary of Health and Human Services providing recommendations for future policies, programs and budgetary requirements related to digestive diseases.

In this year's written report we have updated the commission's long-range plan and where appropriate have made new recommendations in specific areas. We have provided this and in my written testimony I have pointed out certain other areas that the board finds important.

I would like to highlight a couple of areas that we have concern about. The NIDDK supports 12 digestive disease research centers in the areas of liver disease and gastrointestinal secretion, absorption, motility and inflammation. These centers provide shared research facilities and resources that expand and improve the effectiveness of digestive diseases research and facilitate collaboration among many investigators.

The centers also provide an effective setting for training young scientists in the methods and understanding of basic and clinical research.

Unfortunately, the budget of each center has been significantly reduced in the past 2 years, and this reduction, unexpected reductions, have caused serious restriction of current research programs, will interfere with long-term planning and recruitment, and, in fact, will seriously undermine the ability of the centers to accomplish the tasks for which they were originally approved and funded.

The advisory board recommends that appropriate funding be made available to fully support the 12 digestive disease research centers in fiscal year 1988 at the recommended levels. As the board has reviewed other areas of importance, we have looked at other areas that we feel need to be addressed. One has to do with the very low rate of funding of approved research grants.

We, therefore, recommend that additional funds be made available to fund at least 40 percent of approved research grants. We ask that additional funding be made available to expand clinical training and career development awards in the areas of digestive diseases research.

We also feel that certain other areas require some priorities. One has to do with providing academic awards in nutrition so that our medical students can appropriately teach this extremely important area.

The second is to provide academic awards in epidemiology and digestive diseases. We are lacking in individuals trained in both of these areas to provide support for basic and clinical research.

We also ask that additional funds be made available to support the national digestive diseases data system. We are in a position of trying to make policy and suggest policy, and to try to do research without having a good data base. This national digestive disease data system is extremely important.

In summary, the advisory board recommends that the total NIDDK budget be increased to at least $615 million to support the areas that we have highlighted in our annual report and in my written testimony. Thank you.

Dr. FARRAR. That completes our testimony.

Senator HARKIN. Are there any other things that any of you want to highlight or mention briefly before we move on?

Dr. WILSON. I would just like to say, you mentioned diet, and I would like to point out that we have one nutrition center that is really important looking at areas of diet, but in digestive diseases as well as a lot of other areas of national health at this particular time. Diet is becoming extremely important. Other areas are looking into it. Digestive diseases has to also.

Senator HARKIN. Dr. Farrar, thank you, and I thank the panel very much.

STATEMENT OF PAULA HARBISON, M.D., INTERSTITIAL CYSTITIS ASSOCIATION

Senator HARKIN. Our next witness will be Paula Harbison. Tell me who it is that you——

Dr. HARBISON. Interstitial cystitis.

Thank you for allowing us the opportunity to speak before you today. Our organization testified for the first time last year, and since then your committee has been most cooperative in helping us gain recognition from the National Institutes of Health. We are truly grateful for your continuing interest and support.

My name is Dr. Paula Harbison. I am a podiatrist in practice in California. I was diagnosed with interstitial cystitis 5 years ago. I represent the Interstitial Cystitis Association of America.

First, I would like to describe the condition known as interstitial cystitis, the effect it has on its victims, and the extent to which it disrupts the everyday existence of those who would otherwise be hard working and well adjusted American citizens.

Interstitial cystitis is a disease that is seldom discussed even in medical schools. Most physicians have never even heard of it. Interstitial cystitis is an inflammatory disease which affects the lining of the urinary bladder. Intense and progressive inflammation leads to deep scarring and contracture of the walls of the bladder. This results in excruciating pain and a constant need to urinate. Some patients must urinate 60 or more times per day. This leads to disruption of family and social life and loss of gainful employment.

In a pilot study recently conducted, 58 percent of patients with interstitial cystitis were unable to have intercourse or to conceive children due to the severe pain involved. Divorces are commonplace. Forty percent of patients are unable to hold jobs due to the disability caused by this disease. Many of these victims cannot leave their homes even for a short trip to the grocery store. These people are literally trapped in a body that is torturing them day and night with no hope of relief.

Most of these patients consult urologists seeking diagnosis and treatment but the majority of eurologists are improperly trained to recognize this condition or rely on outdated information for their diagnoses. Although interstitial cystitis was once considered rare, recent estimates now indicate that well over 500,000 people may be affected, yet tragically little research has been done to determine the cause of this condition. Nine out of ten victims are women, and most are in their thirties or forties, which should be their most productive years. Men and children are also afflicted.

There are no reliable medications available to relieve the pain and urgency. Indeed, despite the millions of dollars that these patients spend trying to find a doctor who can cure their disease, the great majority are never even properly diagnosed. The ones that are properly diagnosed face the possibility of losing their bladders and wearing a bag outside their bodies for the rest of their lives.

The Interstitial Cystitis Association, with the cooperation of the Urban Institute here in Washington, is currently conducting a detailed pilot study to better understand this disease and its prevalence in society. Since our inception in 1984, the Interstitial Cystitis Association of America has made great strides toward promoting the cause of the interstitial cystitis victim.

We have a nationwide support group. Our media coverage includes the Washington Post, the Boston Globe, the New York Times, "Good Morning America," and "The Today Show." Major medical center have expressed interest in conducting interstitial cystitis research. As yet we have received no medical funding through the National Institutes of Health. NIDDK has received a budget increase of $69 million for fiscal year 1987, but despite their apparently increased interest in interstitial cystitis research there has been no funding as yet.

A request for proposals was sent out earlier this year, and proposals have been received. Yet we have no indication that any of these proposals will be funded. The NIH has scheduled a workshop to discuss interstitial cystitis this fall. We do appreciate this effort, but not if it is intended to be a substitute for the main issue, which is medical research funding specifically for interstitial cystitis.

We are, therefore, requesting the following. One, that interstitial cystitis be included in the Senate committee report. Two, that interstitial cystitis research receive designated funding for the 1988 fiscal year totaling not less than $5 million, and that this funding be slated specifically for interstitial cystitis research and not diverted to some other unrelated urological studies. And three, that a national registry for the study of interstitial cystitis be established and funded for a 5-year period. We request a budget for a national registry of $1.5 million.

Our need is great. Yet we are confident with your assistance and adequate funding for research through NIDDK results will be no less than miraculous.

PREPARED STATEMENT

I know what it is like to live with chronic pain. I have interstitial cystitis. I represent those who cannot be with me today here before you, who are too sick to leave their homes. We appeal to you to help us in our suffering. Help us to fund interstitial cystitis research.

Thank you.

[The statement follows:]

STATEMENT OF PAULA HARBISON

Thank you for allowing us the opportunity to speak before this committee. Our organization testified for the first time last year, and since then you have been most cooperative in helping us to gain recognition from the National Institutes of Health. We are truly grateful for your continuing interest and support.

My name is Dr. Paula Harbison, and I am a podiatrist in private practice in California. I was diagnosed with interstitial cystitis five years ago. I represent the Interstitial Cystitis Association of America.

First, I would like to describe the condition known as interstitial cystitis, the effect it has on its victims, and the extent to which it disrupts the everyday existence of those who would otherwise be hard-working and well-adjusted American citizens.

Interstitial cystitis is a disease that is seldom discussed even in medical schools. Most physicians have never even heard of it. Interstitial cystitis is an inflammatory disease which affects the lining of the urinary bladder. Intense and progressive inflammation lead to deep scarring and contracture of the walls of the bladder. This results in excruciating pain and a constant need to urinate.
Some patients must urinate 60 or more times per day. This leads to disruption of family and social life, and loss of gainful employment. In a pilot study recently conducted, 58% of patients with interstitial cystitis were unable to have intercourse or to conceive children due to the severe pain involved. Divorces are commonplace. 40% of patients are unable to hold jobs due to the disability caused by this disease. Many of these victims cannot leave their homes even for a short trip to the grocery store. These people are literally trapped

Our need is great. But we are confident that with your assistance and with adequate funding for interstitial cystitis research through NIDDK, the results will be no less than miraculous.

As a victim of interstitial cystitis, I know what it is like to live with chronic pain. I am here representing those who are too ill to leave their homes, and who cannot be with us today.

We appeal to you to help us end our suffering. Help us to fund interstitial cystitis research. Thank you.

The Interstitial Cystitis Association

Interstitial Cystitis (IC) is a painful and disabilitating disease of the bladder which afflicts many women and some men. In 1984, it became clear to a handful of women on the East and West Coast of the United States who had IC that there was a desperate need for an organization to help the victims of the disease cope with its effects and to work with the medical community in treating and curing it. Through their efforts, the Interstitial Cystitis Association (ICA) was formed. Its long term goal is to find a cure for IC. Its short term goals are to encourage research projects, obtain medical recognition of IC as a serious physical condition, provide information to physicians on the symptoms which may signal IC, compile an IC Registry or data base for future research, raise public awareness of the disease and provide a support system for sufferers.

In the three years since it was founded, the ICA has made tremendous strides in raising the public consciousness about the existence of IC. There have been numerous articles written about the Association in all types of publications and Board Members have appeared on television on many occasions including the ABC program "Good Morning America". To date the ICA has received over 50,000 in a body that is torturing them day and night, with no hope of relief.

Most of these patients consult urologists, seeking diagnosis and treatment. But the majority of urologists are improperly trained to recognize this condition, or rely on outdated information for their diagnoses. Although interstitial cystitis was once considered rare, recent estimates now indicate that well over five hundred thousand people may be affected. Yet, tragically, little research has been done to determine the cause of this condition. Nine out of ten victims are women, and most are in their thirties or forties, which should be their most productive years. Men and children are also afflicted. There are no reliable medications available to relieve the pain and urgency. Indeed, despite the millions of dollars that these patients spend trying to find a doctor who can cure their disease, the great majority are never even properly diagnosed.

The Interstitial Cystitis Association, with the cooperation of the Urban Institute here in Washington, is currently conducting a detailed pilot study to better understand this disease and its prevalence in society. Since our inception in 1984, the Interstitial Cystitis Association of America has made great strides toward promoting the cause of the interstitial cystitis victim. We have established a nation-wide support system, and have coordinators in nearly all fifty states. Our media coverage includes featured articles in such prestigious journals as The Washington Post, The Boston Globe, and The New York Times, and television interviews on Good Morning America and The Today Show. Our Medical Advisory Board includes the top urologists in the country. Major medical centers have expressed interest in conducting interstitial cystitis research, including the University of California at San Diego, Tufts Medical Center, and the University of Pennsylvania.

Yet, despite the great progress we have made in alerting the public and the medical profession to the seriousness of this disease, we have as yet received no medical research funding from the National Institutes of Health. NIDDK received a budget increase of sixty-nine million dollars for the fiscal year 1987. But despite NIDDK's apparently increased interest in interstitial cystitis, none of these funds have been slated for interstitial cystitis research. A "Request for Proposals" was sent out by the NIH earlier this year, and proposals have been received. Nevertheless, we have no indication that any of these proposals will be funded. The NIH has scheduled a "workshop" to discuss interstitial cystitis this fall. We do appreciate this effort, but not if it is intended to be a substitute for the main issue, which is medical research funding specifically for interstitial cystitis.

We are therefore REQUESTING THE FOLLOWING:

(i) that interstitial cystitis be included in the Senatorial Committee Report, and that interstitial cystitis research receive designated funding for the 1988 fiscal year to total not less than five million dollars;

(ii) that this funding be slated specifically for interstitial cystitis research through the Urology Division at NIDDK, and that this funding not be diverted into some other unrelated urological studies; and

(iii) that a National Registry for the study of interstitial cystitis be established and funded for a five year period -- this is necessary to provide a research base enabling data collection for future investigations. We request an annual budget for the National Registry of 1.5 million dollars.

letters and has an active mailing list of 5,000 names. To reach out to the sufferers across the country, the ICA has developed a network of support groups which serve the needs of the IC patients in a local context. There are ICA state or regional coordinators in almost every state of this country helping to carry out the work of the ICA.

In addition to providing victims of IC with support, the ICA communicates with all members quarterly in the form of a newsletter. This information is essential in providing the most up-to-date information on the disease and its treatments. In September of 1986, the ICA held a conference in Boston on IC which was attended by victims of IC from all over the United States. These people remain active in the ICA and many serve as coordinators of their state in ICA activity. At the conference a pilot study on IC was conducted and it is the first of its kind to be done in the United States. This conference followed the first scientific conference on IC. Held also in Boston, it was attended by physicians from across the country and Europe.

The most important goal of the ICA is to find a cure for the disease and helping to promote research remains its first objective. The ICA has created a Medical Advisory Board currently chaired by Edward Messing of the University of Wisconsin Medical Center. The Medical Advisory Board members review research proposals and communicate with urologists across the country about IC. To date the ICA has received $70,000.00 for research projects at the University of Pennsylvania. Several other centers including Tufts New England Medical Center and Stanford University Medical Center are ready to begin research once the funds become available.

Several research proposals on interstitial cystitis are currently being reviewed by study committees of the National Institutes of Health. But despite the request of the Senate and

House that "the Institute should give special consideration to proposals for research directly related to IC," no proposal on IC research has been approved or funded to date. To acquaint members of the Congress with the concerns of the IC patient and with the need for research in this area, representatives from the ICA testify before the Senate and House Appropriations Subcommittees on a yearly basis. For the first time, the National Institutes of Health is sponsoring a workshop on IC which will be held in Washington in August of 1987. As well, to facilitate advocacy efforts the ICA has joined the National Organization for Rare Disorders, which campaigns for research funds from the National Institute of Health.

The ICA is a strong voice for the thousands of victims of interstitial cystitis across the country. The work of the Association offers the strongest hope of a cure to them by way of its unwavering commitment to research and better medical understanding. The ICA is governed by a Board of Directors composed of:

East Coast	West Coast
Dr. Vicki Ratner	Dr. Paula Harbison
Barbara Seiden	Barbara Flanigan
Judith Heller	Lana Fayman

The Medical Advisory Board is composed of:

Chairman, Edward Messing, M.D.	Chairman, Dept. of Urology University of Wisconsin Medical Center
Philip Hanno, M.D.	University of Pennsylvania
Grannum Sant, M.D.	Tuft's New England Medical Center
Lowell Parsons, M.D.	University of California, San Diego Medical Center
David Staskin, M.D.	Boston University Medical Center
Alan Wein, M.D.	Chairman, Dept. of Urology University of Pennsylvania
Former Chairman, Thomas Stamey, M.D.	Chairman, Dept. of Urology Stanford University Medical Center

Interstitial Cystitis

Interstitial Cystitis (IC) is a little known disease which has completely disrupted the lives of hundreds of thousand of families in the United States and throughout the world. It was identified in 1915, but its cause and cure are still unknown.

Interstitial Cystitis is a chronic inflammation of the bladder wall which causes the formation of scar tissue. This causes the bladder to stiffen and contract, reducing its capacity from approximately 12 ozs., or 350 cubic centimeters, to as little as 2 ozs., or 50 cc (the size of a small juice glass). The decrease in capacity and consequent increase in pressure cause persistent acute pain and the constant urgent need to urinate. Victims of IC often are forced to urinate up to 60 times a day. This makes sleep difficult and day-to-day life next to impossible.

IC may be caused by a defect in the protective lining of the bladder, exposing the sensitive underlying tissue to "acid burn" from urine. The defect may be an auto-immune phenomenon in which the body fails to recognize its own tissue and sends antibodies to attack it as a foreign substance. This is, however, only a theory, which has yet to be proven through research.

The symptoms of IC are extremely debilitating. Many sufferers are literally confined to their homes, unable to hold jobs because of severe pain. Many are unable to have sexual intercourse making pregnancy difficult and marital relationships strained. The first study conducted in the United States on IC revealed that 40% of patients are unable to hold jobs, 27% have separated from their spouse or partner other because of the disease and, most distressingly, 12% have attempted suicide because of the severity of the pain.

Urologists who rely on outdated information about interstitial cystitis often mistakenly label IC as a psychosomatic condition. And while the medical community now recognizes the disease as a serious physical condition, an IC patient is still often forced to go from doctor to doctor trying to find an explanation for and relief from a life of pain. It requires a very knowledgeable urologist to carry out the correct test which diagnoses this condition. It is not unusual for a victim to see up to ten urologists over a period of many years before a correct diagnosis is made. But one of this nation's leading urologists, Dr. Thomas Stamey of the Stanford University Medical Center, estimates the incidence of IC as 1 in every 60 visits to the urologist's office. This would amount to approximately 500,000 IC victims in the United States alone.

Although some research projects have been undertaken in the years since the discovery of IC, little progress has been made in understanding it. As a result, Interstitial Cystitis remains a poorly understood, frequently ignored and low priority disease which continues to painfully afflict the lives of thousands of people everywhere.

Senator HARKIN. Well, I have several letters from Iowa that have come in, from my home State, on this. I will be frank with you. I had never heard of it before, and I am sure that is probably true of most Americans.

I cannot believe we are not doing something on this, that people are not looking at it. We will get something in the report language.

Dr. HARBISON. Thank you so much.

Senator HARKIN. We will get something in the report language and we will see if we cannot get something on it. I was informed by counsel that there were three proposals in last year but that the peer review process at work did not deem them adequate or valid scientifically—had a valid approach, perhaps, or scientific basis to them. Hopefully through our report language we can urge others to submit other proposals perhaps that might be worthy of some funding in the coming year.

Dr. HARBISON. In response to the NIH request for proposals there were 12 proposals submitted this year.

Senator HARKIN. Twelve submitted this year. Well, we will ask them some questions about it.

Dr. HARBISON. Thank you very much.

Senator HARKIN. We will find out what is going on. But as far as you know there has been nothing done to even give a hint of what kind of cure there might be, or what even causes it? They just do not know?

Dr. HARBISON. Not as yet. There are some very basic studies that have been done, but there has really been no funding for them and no interest in it because of this.

Senator HARKIN. Well, we will pursue it.

Dr. HARBISON. Thank you.

Senator HARKIN. Thank you very much.

STATEMENT OF CHARLES M. CLARK, M.D., CHAIRMAN, NATIONAL DIABETES ADVISORY BOARD

Senator HARKIN. The next one is Charles Clark, Charles M. Clark. Dr. Clark is chairman of the National Diabetes Advisory Board.

Dr. CLARK. I am Charles Clark. I am professor of medicine at Indiana University and director of the Diabetes Research and Training Center there. I am speaking today on behalf of the National Diabetes Advisory Board, of which I am chairman. We have submitted written testimony, and what I would like to do is tell you a little bit about the board and our recommendations.

The board was established in 1987 to look at the implementation of a long-range plan to combat diabetes and to make recommendations to Congress regarding Federal health programs primarily focused to diabetes research. This year, 1987, 10 years later, we have revived a long-range plan summarizing the advances that we have made over the last decade in making programmatic recommendations for future programs. I have a summary of the long-range plan which has specific recommendations which I will leave with the committee.

There are tremendous advances which have occurred in the last decade for the treatment of diabetes and also the pathophysiology of diabetes. I will mention a couple, one of which is that we now have effective treatment for eye disease with laser photocoagulation which can prevent blindness in 60 to 70 percent of patients. We now routinely perform kidney transplantation. Kidney disease affects approximately 40 percent of patients with juvenile diabetes, and as a matter of fact is probably now the leading cause of new end stage renal disease. One out of every four new patients has end stage renal disease.

We have therefore accomplished a lot because of research and by response to Congress, the establishment of the diabetes centers, one of which is in Iowa City, by the way. There are 13 across the United States. They have focused research in diabetes.

However, on the other hand, as we look at the accomplishments in the future we find in many ways we are falling behind. I was reading the Journal of Diabetes, which is the major research journal, last month. The first article was from Japan. The second article was from

Japan. The third article was from the United States with a Japanese worker. Two more articles from England. Why is that occurring? I think one of the reasons it is occurring is because if you look at where we are reporting research training compared to where we were in 1980 we have fallen approximately 50 percent.

Young people—it is more easy to give young people money when they come from Europe or Asia to learn to do research in the best labs than it is in the United States, and one of the strong recommendations that has been a recurrent theme today is that more money needs to be given for training of future researchers.

Second, when the long-range plan was initiated approximately half of all the approved NIH grants were funded. Last year it was down to 28 percent, one in four. We feel that one-half is the right number, and that the NIH budget should be increased so that 50 percent of the research approved by peers is funded. Last year the diabetes research and training centers and other centers had their budgets cut by 13 percent because there was not adequate money to provide money that was approved by peers. We think that we need not only to fund these centers completely but also to expand the centers' program, which would require an additional $9 million.

There are two new programs in the long-range plan. One relates to research. The advances of research in molecular biology, immunology, which are so important to diabetes, are being conducted in special centers. There is no money available for program projects to take diabetes experts and these new experts together to do research in diabetes, and we would like for these new centers to be established.

In addition to that, the diabetes control programs of the CDC which are in 28 States have provided us with information regarding the effectiveness and the application and demonstration of new treatment programs. These have been very effective, and we think now is the time for the CDC to take on major efforts in the translation of these research advances to the medical community, problems with pregnancy and diabetes, for example. In good centers, 1 to 2 percent mortality rate, but in the country as a whole mortality rate is 7 to 8 percent. With proper demonstration programs we could reduce that mortality rate. This is a single example of the sort of thing we are talking about.

PREPARED STATEMENT

I would be happy to leave you with specific recommendations. Thank you very much for the opportunity to testify.

Senator HARKIN. Thank you very much, Doctor. We appreciate it.

[The statement follows:]

STATEMENT OF CHARLES M. CLARK

I am Dr. Charles M. Clark, Jr., Professor of Medicine at Indiana University School of Medicine, Director of the Diabetes Research and Training Center at Indiana University, and Chairman of the National Diabetes Advisory Board. The Board was established by Congress to: (1) Review and evaluate the implementation of the long-range diabetes plan and (2) report annually to Congress and the Secretary of Health and Human Services on recommendations for future policies, programs, and budgetary requirements related to Federal diabetes research and health care activities. This year, the National Diabetes Advisory Board has updated the long-range plan, originally developed in 1976, to guide the next 10 years of Federal diabetes activities. The following has been extracted from the Executive Summary of The National Long-Range Plan to Combat Diabetes, 1987, a copy of which is being provided to the subcommittee today.

Diabetes is a major public health problem. Approximately 6 million people in the United States have diabetes, and an additional 5 million have the disease, but it has not yet been diagnosed. In terms of human suffering, individuals afflicted with diabetes face not only a shortened lifespan but also the probability of incurring acute and chronic complications.

The economic burden of diabetes is enormous. Each year, patients with diabetes or its complications spend 24 million days in the hospital. A conservative estimate of total annual direct costs attributable to diabetes is $13.8 billion; the full economic impact of this disease is even greater because additional medical expenses often are attributed to the specific complications of diabetes rather than to diabetes itself. For example, annual hospital costs for amputations related to diabetes exceed $350 million. The annual cost to Medicare for diabetes-related end-stage renal disease is more than $330 million, a figure that is expected to double in the next decade.

Since the passage of the National Diabetes Mellitus Research and Education Act in 1974, we have witnessed remarkable progress in our knowledge of the causes, clinical course, and complications of diabetes. During the next decade, advances in our understanding of the basic pathophysiology of diabetes make clinical therapies to prevent IDDM a real possibility; we also will undoubtedly witness an explosion of new technologies and drugs for the treatment of diabetes mellitus. A number of studies that hold great promise are currently under way, including evaluation of internal insulin infusion pumps that utilize glucose sensors, islet cell and segmental pancreas transplantation, immunosuppression therapies, and new antihypertensive agents.

In the meantime, practical and effective treatments for many complications of diabetes are now available. Research on diabetic eye disease has provided us with the means to significantly reduce the incidence of blindness in patients with diabetes. Effective therapy exists for mothers with diabetes to improve their prospects for a normal baby. Demonstration programs supported by the Centers for Disease Control have shown how the application of currently available diabetes prevention and treatment information can lead to significant reductions in mortality, morbidity, and associated economic costs.

In spite of these advances, much remains to be done. Today's biomedical findings are built upon yesterday's basic and clinical research and produce the foundation for tomorrow's breakthroughs. The momentum in diabetes research and its translation to clinical practice must be maintained.

The long-range plan recommends the continuation and expansion of current programs and two new major initiatives. The order in which the recommendations are presented does not imply priority. Both the continuation and expansion of our current successful efforts in diabetes research and translation and the development of the new initiatives are equally and vitally important.

The National Long-Range Plan to Combat Diabetes, 1987 contains two major new programs designed to enhance diabetes research and improve coordination of the translation of research results to clinical care. These new programs, which will require additional funds for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the Centers for Disease Control (CDC), will complement current research and translation activities. The National Diabetes Advisory Board recommends:

- Establishment of eight Diabetes Interdisciplinary Research Programs within the National Institute of Diabetes and Digestive and Kidney Diseases to promote the integration of new basic science research methodologies into diabetes research programs. These programs will provide direct support for diabetes-related research in basic science laboratories and thereby encourage, in a cost-effective manner, existing facilities at the forefront of biotechnology to attack specific research questions. Existing Diabetes Endocrinology Research Centers and Diabetes Research and Training Centers differ from this initiative because they only support core facilities (shared resources) and short-term pilot and feasibility research projects. In contrast, the new Diabetes Interdisciplinary Research Programs will provide direct support for the research projects of the participants.

- Establishment of a Diabetes Translation Center (DTC) at the Centers for Disease Control to plan, conduct, and coordinate national efforts to transfer diabetes research more rapidly to patient care. The DTC will utilize the recognized expertise of the Centers for Disease Control in the areas of disease surveillance, applied research, technology transfer, development of professional care standards and guidelines, and public education to facilitate the complex and lengthy process of translating research findings to medical practice.

The NIDDK is the lead Federal agency for diabetes-related research and research training. Current diabetes research programs supported by NIDDK also must be strengthened to achieve the goals of the long-range plan. The Board recommends that the NIDDK receive sufficient funding to:

- Support the Diabetes-Endocrinology Research Centers (DERC's) and the Diabetes Research and Training Centers (DRTC's) at budget levels recommended by the scientific review committees and establish four additional DERC's/DRTC's.

- Support at least 50 percent of approved competing individual research grants at budget levels approved by the scientific review committees.

- Complete the Diabetes Control and Complications Trial as planned.

- Support training and development of research personnel in diabetes-related areas at each stage of the educational process. Funding should be restored to at least the fiscal year 1980 level of support.

The Board also recommends that the NIDDK: (1) Develop plans for, and implement, a Biologic Resource Bank for Studies on Diabetes to facilitate the sharing of valuable research materials and application of new technologies to their analysis; and (2) design an Information and Data System for Diabetes Research to facilitate the sharing of diabetes research data among investigators.

In addition, the Board recommends that: (1) Funding be increased for diabetes-related research and training activities within other Institutes of NIH, (2) constraints on NIH intramural manpower training opportunities be removed, (3) the Division of Research Resources receive funds to strengthen the General Clinical Research Centers, (4) the National Institute of Child Health and Human Development receive adequate resources to maintain centers that focus on research on pregnancy in women with diabetes, and (5) adequate funds be appropriated to ensure the completion of diabetes-related clinical trials of the National Eye Institute and the National Institute of Child Health and Human Development.

As it oversees implementation of the new long-range plan, the National Diabetes Advisory Board will have a major role in advising Congress and the Secretary of the Department of Health and Human Services on diabetes issues. The Board therefore respectfully recommends that:

- Additional funds be appropriated for support of National Diabetes Advisory Board activities and a full-time Executive Director be assigned to assist the Board.

Funds for all of the above initiatives are included in the Board's budgetary recommendations for Federal agencies (table 1). Specifically, the Board recommends that in fiscal year 1988 an additional $48.1 million be provided to the NIDDK for diabetes-related activities within a total Institute appropriation of $665 million.

Thank you for the privilege of appearing before your subcommittee. I will be pleased to respond to any questions you may have.

Table 1
BUDGET RECOMMENDATIONS FOR DIABETES-RELATED PROGRAMS[a]
(Millions of Dollars)

	1987 Est. Appropriations	Long-Range Plan Additions
National Institutes of Health (NIH)		
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)		
Diabetes Interdisciplinary Research Programs	—	10.0
Biologic Resource Bank	—	[b]
Information and Data System	—	[b]
Research Project Grants	82.4	23.4
Training and Development of Research Personnel	6.4	5.7
Diabetes Endocrinology Research Centers/ Diabetes Research and Training Centers	13.5	9.0
Other Diabetes Programs	19.0	—
Subtotal, NIDDK	121.3	48.1
National Heart, Lung, and Blood Institute	19.5	5.2
National Eye Institute	21.3	5.7
National Institute of Child Health and Human Development	12.5	3.3
National Institute on Aging	2.6	0.7
National Institute of Allergy and Infectious Diseases	7.2	1.8
National Institute of Dental Research	4.5	1.3
National Institute of General Medical Sciences	2.5	0.7
National Institute of Neurological and Communicative Disorders and Stroke	8.5	2.2[c]
Division of Research Resources	16.1	9.0[d]
National Center for Nursing Research	1.1	0.3
Other	0.6	0.2
Subtotal, NIH	217.7	78.5
Centers for Disease Control		
Diabetes Translation Center	7.2[e]	14.0
Health Resources and Services Administration (HRSA)		
Indian Health Service	2.9	5.0
Other HRSA	—	3.5
Subtotal, HRSA	2.9	8.5
National Center for Health Services Research	—	1.7
Veterans Administration	[f]	3.5

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[a] Amounts are for diabetes-related activities within these agencies.

[b] Required resources to be determined upon completion of project plans.

[c] Additional resources to be determined upon completion of NIH plan to increase research activity in diabetic peripheral neuropathy.

[d] Includes $7.5 million for General Clinical Research Centers Program and $1.5 million for Clinical Associate Physician Program.

[e] Current budget of the Centers for Disease Control's diabetes control program, to be incorporated into the new Diabetes Translation Center.

[f] Amount not available.

STATEMENT OF E. DARRACOTT VAUGHN, M.D., INTERSOCIETY COUNCIL FOR RESEARCH OF THE KIDNEY AND URINARY TRACT

Senator HARKIN. Next we have Darracott Vaughn. Dr. Vaughn, Intersociety Council for Research of the Kidney and Urinary Tract.

Dr. VAUGHN. Good morning.

Senator HARKIN. Good morning, Doctor. Please proceed. As with all the other witnesses, your statement will be made a part of the record, and you may summarize it.

Dr. VAUGHN. Senator Harkin, I represent the Intersociety Council for Kidney and Urologic Diseases, which virtually encompasses all the neprhologists and urologists, approximately 15,000 people taking care of individuals with kidney and urological diseases.

You have my written report, so I will be brief.

I would first like to thank the committee for the establishment of the O'Brien centers, particularly Senator Weicker and Senator Hatfield, who were instrumental in getting us the funding last year for the kidney and urological centers. Excellent applications have been submitted and are under review.

I think I will lay down what I was going to say, and my message today is quite simple and really carries on what Dr. Clark just said a few moments ago. And that is the interest in the Intersociety group in the effect of diabetes on kidney disease. Let me make this point, I think, in a way that you will understand it, very simply.

You were talking to Josh here a little while ago. If he lives to be age 20, which I certainly hope he will, he has a 25 percent chance of having kidney disease. If he lives to age 40, which again is very young, he has a 50 percent chance of having kidney disease. Fifty percent of the people entering end stage renal disease, which costs this country $3 billion a year, have diabetes mellitus as the etiology of their end stage renal disease.

Simply, we are asking for new initiatives, interdisciplinary initiatives in the Kidney Institute, $5 million to $10 million a year of new money to apply new scientific breakthroughs to help prevent people like Josh with insulin-requiring diabetes to end up in end stage renal disease at a relatively young age.

The science is here. Immunosuppressive medicines given to animals can reverse the animal's need for insulin. They no longer need insulin for control. This is drugs which prevent the antibody formation which destroys the receptors, as was previously discussed by Dr. Colwell. The science is here. We need the money. We need the new initiative. And hopefully not only can cut down the cost but the tremendous disability of these people with diabetes.

Thank you.

PREPARED STATEMENT

Senator HARKIN. Thank you very much, Dr. Vaughn. We appreciate it.

[The statement follows:]

STATEMENT OF E. DARRACOTT VAUGHAN

Thank you for providing me with the opportunity to comment on the appropriations for the National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK), for the Fiscal Year 1988. I am E. Darracott Vaughan, Jr., M.D., James J. Colt Professor and Chairman, Division of Urology, The New York Hospital-Cornell University Medical Center. I appear before you today representing the Intersociety Council on Kidney and Urological Disease, which is made up of virtually all groups active in research and the treatment of kidney and urinary tract disorders, with 15,000 physician and 50,000 lay members.

Mr. Chairman and members of the subcommittee, the Intersociety Council is deeply concerned aabout the tremendous cost of the End Stage Renal Disease Program, which is estimated to exceed $3 billion in 1989. Last year this committee, in a grand effort to address the human and economic costs of end stage renal disease, appropriated funds for 6 kidney/urologic disease centers. I am pleased to inform you that 13 very good applications were filed and have been reviewed by a special study section at NIDDK.

Mr. Chairman, the largest single cause of renal disease is diabetes mellitus. At present, nearly 30% of patients entering the End Stage Renal Disease Program have kidney disease of diabetes mellitus. It is projected that the percentage will grow to 50% by 1997.

The incidence of kidney disease of diabetes mellitus among insulin requiring diabetics is approximately 21% at 20 years and 45% at 40 years after the onset of diabetes. This statistical data is of particular concern because as the survival of diabetics increase, the incidence of kidney disease of diabetics mellitus is expected to increase.

Unfortunately, those diabetic patients who progress to end stage kidney disease have more frequent complications and their rehabilitation rate is less than one half that of other groups.

Addressing this expanding problem, on November 3-4, 1986, representatives of voluntary health agencies, businesses, academia and government met to address kidney disease of diabetes mellitus. The voluntary health agencies represented were the National Kidney Foundation, the American Diabetes Association and the Juvenile Diabetes Association. The list of corporations participating included CIBA-GEIGY, Merk Sharp Dolme and Squibb, representatives of more than 15 academic centers and 13 government agencies also participated in the two day meeting.

At the conclusion of the meetings, the group adopted the following resolution:

> WHEREAS, end-stage renal disease (ESRD) presently said cost is increasing at a rate of ten percent (10%) each year, and;
>
> WHEREAS, kidney disease of diabetes mellitus presently represents nearly one-third (1/3) of the end-stage renal disease patients and statistical information shows that end-stage renal diseal will increase to fifty percent (50%) of all patients within the next 5 years, and;
>
> WHEREAS, there is presently experimental and clinical data that strongly indicate treatment exists to prevent or arrest kidney disease of diabetes mellitus, and;
>
> THEREFORE, BE IT RESOLVED, that additional new funds for support are sought for basic and clinical research in kidney disease of diabetes mellitus for Fiscal Year 1988.

Moreover, the clinical and basic science panels identified a number of promising areas that need research support. The clinical panel noted "The field of kidney disease of diabetes mellitus is poised on the threshold of an important new era which may ultimately lead to a significant reduction in the morbidity and mortality of the renal complications of diabetes mellitus." For example, drugs have been identified which can reverse the need for insulin in animal models of diabetes and hold great promise for patients with Type I (insulin requiring) diabetes. They recommended clinical trials and studies in the epidemiology of kidney disease of diabetes mellitus in groups with a known predisposition to the diabetes, for example, the Pima Indian population. The effects of antihypertensive agents and glycemic control on the progression of kidney disease in patients with diabetes mellitus warrants study.

To complement the scientific proposals, the voluntary health agencies agreed to undertake an accelerated public education effort to alert health professionals and patients as to the risk and complications of kidney disease of diabetes mellitus. The corporate participants very generously committed the necessary funds to cooperate with NIH in the support of an evaluation of the prevention of end stage renal disease through pharmacological intervention. Initially they have agreed to the clinical use of antihypertensives in patients with kidney disease of diabetes mellitus.

Accordingly, this year in our effort to prevent or find a cure for kidney disease of diabetes mellitus, we are seeking $4 million as a new initative to initiate some of the research recommended by the clinical and basic science panels at the November 1986 meeting. This recommendation is part of our determination to address every aspect of kidney/urologic diseases. We believe this added support will do much to achieve that goal.

In addition, the Intersociety Society Council for Kidney and Urological Diseases supports the recommendation for the National Institutes of Health of the Ad Hoc Group for Medical Research Funding. In particular, we urge the subcommittee to fund 7000 new and completing renewal research projects and an overall budget of 7,690 million including facilities for FY 1988.

The Intersociety Council members are distressed to learn that the Administration's FY 1988 budget omits all funds for any of the activities required by the National Organ Transplant Act.

Accordingly, we strongly support continuing funds for:

The Organ Procurement and Transplantation Network.
The Scientific Registry
The Office of Organ Transplantation.

Finally, we thank the committee for recommending the establishment of the Kidney and Urology Advisory Board which has held its initial meeting and will present its findings to this committee next year.

Thank you for the opportunity to appear before you today.

STATEMENT OF JAY Y. GILLENWATER, M.D., AMERICAN UROLOGICAL ASSOCIATION

Senator HARKIN. Dr. J. Gillenwater, American Urological Association.

Dr. GILLENWATER. Good morning, Senator Harkin.

Senator HARKIN. I just might announce that I am going to have to leave after this witness. Senator Burdick will be here in just a couple of minutes. Sorry. Go ahead, Doctor.

Dr. GILLENWATER. Senator Harkin, it is a pleasure to appear before this group to speak for the NIDDK. I am chairman of urology at the University of Virginia, on the executive committee of the AUA, on the NIH council, and president of the American Board of Urology.

If Josh lives to age 40 or 50 he is almost certainly going to be impotent from diabetes, and he has a very high risk of having neurogenic bladder, and he also probably is going to get BPH. Eighty percent of American males get enlargement of the prostate, as President Reagan had. Over 10 percent of these need surgery.

I have some good news. The kidney stone machines which—Iowa has one and the University of Virginia has one—they are now in 140 centers in the United States, and these are almost eliminating surgery for kidney stones. The same machines are now being converted to use for gallstones. Ten of these will be brought in the country this year.

The funding for the O'Brien centers, I was on the study section and two of these are probably going to go to BPH and to urology. There are new findings in benign prostatic hypertrophy. A group in Milwaukee, WI, has found a growth factor in the prostate that may stimulate this growth. What happens with your prostate and my prostate is that—it is different than any other organ in the body in that it keeps growing throughout life, and it is known that the eunuch, a person without testes, doesn't get this growth, so it is thought to be some hormone coming from or some factor coming from the testes. We need a lot more research into this area to try to figure out what is doing this, and it should be preventable by a pill one of these days.

The highest priority of our group would be for the end stage renal disease, which you have heard a lot about, the diabetes. The dialysis transplant patients cost the Government almost $3 billion last year, or the coming year, and you certainly need to put money in to try to prevent this rather than to treat it. In urology we are concerned about the serious need for qualified urologic research investigators. We request a report from NIH on the needs of urology and research training to look into urologic research training along with a projection of manpower needs and required funding to meet these needs.

I appreciate the opportunity of speaking before you. Thank you very much.

PREPARED STATEMENT

Senator HARKIN. OK, Doctor. Thank you very much.

The subcommittee will be in recess until the arrival of Senator Burdick, which will be just a few minutes.

[A brief recess was taken.]

[The statement follows:]

STATEMENT OF JAY Y. GILLENWATER

I am Jay Y. Gillenwater, chairman of the Department of Urology at the University of Virginia Medical Center and member of the American Urological Association's executive committee and of the Council of NIDDK. I am presenting this testimony on behalf of the American Urological Association whose membership of 6,200 represents the majority of American urologists. I also represent the American Association of Clinical Urology, the Society of University Urologists and the American Board of Urology.

Mr. Chairman, a lot of good things have happened recently regarding our ability to treat urological diseases. The early excellent results with using externally generated shock waves and ultrasonic sound waves to fragment kidney stones continue to be achieved and uses for the technology are expanding. Currently there are over 130 lithotripters in operation in the United States and five or six new and different varieties are being tested. The lithotripter has almost eliminated the need for kidney stone surgery and cut health care costs by 50% for kidney stones.

In another area, significant advances in the diagnosis and management of testicular and bladder cancer are being made.

We would like to thank you for the funding of the six center grants in kidney and prostate disease. I was a member of the study section which recently reviewed the 12 applications for the centers. All of the grants were excellent and proposed more good research than we could fund. It would appear that grants in both benign prostatic hypertrophy and end stage renal disease will be funded.

The National Kidney and Urologic Diseases Advisory Board has been established this year and will be a great help in establishing institutional guidelines and policies.

The NIH conference on BPH was successful in attracting new investigators into studying benign prostatic hypertrophy. As evidenced on the center grant applications, a prostatic growth factor has been isolated. There is an increased awareness of prostate research which is showing up in increased grants.

As a member of the NIDDK Advisory Council I think I can speak from a true overview of research needs in urology.

Kidney and urinary tract diseases and disorders affect more than 13 million Americans, with over 80,000 deaths each year. Federal expenditures for end stage renal disease for those patients requiring maintainance dialysis and renal transplantations are almost $4 billion annually. The highest priority this year has to be to fund research in the areas leading to end stage renal disease: (1) diabetes, (2) polycystic kidney disease, (3) glomerulonephritis, (4) urinary tract infections and (5) obstructive uropathy.

Diabetes is the single most common cause of end stage renal disease. $10 million new money is needed for five years to fund research in renal and urologic disorders related to diabetes. Studies are needed to investigate the natural history of diabetes mellitus. A multidisciplinary approach embracing epidemiology, clincial nephrology, pathology, genetics, urodynamics, neuroanatomy and microvascular anatomy is needed.

Diabetics have a high incidence of voiding disorders related to a neurogenic bladder and problems with sexual dysfunction because of impotence. New technology is available to enable both these problems to be better defined and treated in experimental animals and patients.

Other major urologic problems requiring increased research support are benign prostatic hypertrophy, urinary incontinence, erectile impotence, urinary tract infections and interstitial cystitis.

The first priority has to be to fund training grants since today's trainees are tomorrow's researchers. Recruitment of researchers from the basic sciences to investigate urological diseases is needed as a first step.

Enlargement of the prostate occurs in 80% of men and 10% eventually require surgery to relieve the obstruction. All of us are aware that President Reagan recently had surgery to relieve his prostate obstruction. It is known that some prostatic growth factor(s) are secreted by the testes and the research money you voted has allowed isolation of at least one factor. More research is needed. Technology is available to define these factors and develop the means to prevent and treat this prostatic growth.

Urinary incontinence is a common social and medical problem, particularly in the aged. Basic research is needed in bladder and urethral physiology to better understand normal and abnormal micturition. Incontinence in the aged frequently leads to urinary tract infections and decubitus ulcers.

Interstitial cystitis is a chronic debilitating disorder that affects as many as 1.8 persons per 10,000. The NIDDK Institute is bringing together clinical and basic scientists in a conference in August 1987 to define this disorder and target areas for research. Patients with interstitial cystitis have bladder pain, pressure and have to void frequently, some as often as every 30 to 60 minutes during both the night and day. This disorder involves mostly young women.

Sexual dysfunction is a common problem in men. Recent advances have been made in the field of injecting vasoactive compounds directly into the penis which cause an erection lasting two to four hours. Use of these compounds allows some of the disorders to be better diagnosed and in some cases treated. Funding is needed to investigate the basic research and clinical problems related to erections.

As a member of the academic urologic community and study section council, I feel we are at a place in time where if new monies were appropriated, major new advances would result.

We urge the committee to provide a level of funding of $596 million for this institute.

We also recommend that the total appropriation to the National Institutes of Health be $7.6 billion in support of the Ad Hoc Group for Health Research Funding.

Again, Mr. Chairman, we are deeply grateful to you for your interest in all of biomedical research but especially your concern about research in urology.

I would be pleased to answer any questions you may have.

STATEMENT OF EDWARD H. KASS, INFECTIOUS DISEASE SOCIETY OF AMERICA

Senator BURDICK [presiding]. The next witness is Edward H. Kass.

Welcome to the committee, Doctor.

Dr. KASS. My name is Edward H. Kass. I am the William Ellory Channing, professor of medicine at Harvard Medical School and director of the Channing Laboratory at the Brigham and Womens' Hospital in Boston.

Much of my testimony today will be devoted to the subject of AIDS. This is particularly appropriate because the Infectious Disease Society of America represents the overwhelming majority of infectious diseases specialists in this country, and in particular those individuals involved in clinical and basic research in infectious diseases, including AIDS.

Mr. Chairman, I want to take this opportunity to express the appreciation of our organization to you and your committee for your support of the National Institute of Allergy and Infectious Diseases and for AIDS research and education, both at the institute and in other sectors of the Public Health Service.

With respect to the NIAID, last year this subcommittee approved a funding increase for this Institute of some $141 million which enabled it to fund 1,910 new and competing research grants. In addition, this subcommittee held steadfast against the administration's proposal to reappropriate fiscal year 1987 funds, a proposal that would have resulted in cuts of as much as 15 percent in the NIAID's new and competing grant awards. The subcommittee's swift and decisive action in apprising the Secretary of the Department of Health and Human Services of its opposition to the reappropriation request abrogated the need for costly and protracted litigation on this issue, but more importantly, ensured that there was little, if any, disruption in ongoing biomedical research efforts.

The NIAID has been in the forefront of research and controlling new diseases that inevitably appear and will continue to appear, diseases such as Legionnaires' disease, toxic shock syndrome, and now AIDS, about which I wish to speak in greater detail.

Human immunodeficiency virus, or HIV, is the cause of AIDS, and now infects more than 1½ million people in this country and countless millions throughout the world. This epidemic is growing every day. Just a few weeks ago, for example, the Surgeon General of the United States reported that AIDS could be on the threshold of exploding among heterosexuals as it did among homosexuals in the 1980's.

The Institute of Medicine's Committee on AIDS estimated that biomedical research on AIDS will require an investment of at least $1 billion annually by 1990 and a continuing commitment over many years. Moreover, as was pointed out, this investment must be in newly appropriated funds and not funds syphoned from other biomedical research efforts because the Nation's general health efforts as well as those directed against AIDS need continuing progress in basic biomedical science on the broad front.

We must not diminish our work on controlling the threat of other diseases while we confront this new monster in our midst.

The NIAID is the focal point at the NIH for what has become a national effort to find ways to combat, treat, and ultimately to prevent any further spread of a large number of diseases, including AIDS. Thanks to the work of this and other institutes, a tremendous amount has already been learned about the genetic structure and the transmission of this virus and about the disease itself. Unfortunately, much less is known about how it initiates the infection, how it maintains the infection, and what determines the progression and diversity of the illness.

To remedy these gaps in our current knowledge the Institute of Medicine recommended expanded research in a number of vital areas, and these are listed in the submission.

The NIAID has been and will continue to be in the forefront of research efforts to study all aspects of the AIDS virus as well as of other affected agents. To perform all the research for which it has the capability will require, in the judgment of professionals in the field, an increase in the NIAID budget to $890.4 million. Such an increase would allow the Institute to fund 1,248 research grants in the area of AIDS as well as in the other basic biomedical research projects in its portfolio. This funding investment will allow the Institute to increase the number of research training awards to 510, a significant increase over the 360 such awards available this year.

Research training in infectious diseases has taken on renewed importance and urgency because of the AIDS crisis, and it is extremely important to assure that there is an adequate cadre of well-trained researchers that can respond to the burgeoning needs in this area, with special needs for the care of these patients.

Mr. Chairman, on behalf of the infectious disease research community, thank you again for your support of the NIAID and its work, and for biomedical research generally. We greatly appreciate the leadership that this committee has shown.

PREPARED STATEMENT

Senator BURDICK. Thank you very much for your contribution this morning. I think you will be pleased with what the committee does in this area. Thank you.

Dr. KASS. Thank you.

[The statement follows:]

STATEMENT OF EDWARD H. KASS

Mr. Chairman and members of the Committee, my name is Edward H. Kass. I am the William Ellery Channing Professor of Medicine at Harvard Medical School and Director of the Channing Laboratory at the Brigham and Women's Hospital in Boston, Massachusetts.

Much of my testimony today will be devoted to the subject of AIDS. This is particularly appropriate because the Infectious Diseases Society of America ("IDSA") represents the overwhelming majority of infectious diseases specialists in this country and, in particular, those individuals involved in clinical and basic research in infectious diseases, including AIDS.

Mr. Chairman, I want to take this opportunity to express the IDSA's appreciation to you for your support of the NIAID and AIDS research and education, both at the Institute and in other sectors of the Public Health Service. With respect to the NIAID, last year this Subcommittee approved a funding increase for the NIAID of some $141 million which enabled it to fund 1,910 new and competing research grants. In addition, this Subcommittee held steadfast against the Administration's proposal to "reappropriate" fiscal year ("FY") 1987 funds -- a proposal that would have resulted in cuts of as much as 15 percent in the NIAID's new and competing grant awards. The Subcommittee's swift and decisive action in apprising the Secretary of the Department of Health and Human Services of its opposition to the reappropriation request abrogated the need for costly and protracted litigation on this issue, but more importantly ensured that there was little if any disruption in ongoing biomedical research efforts.

AIDS -- THE CHALLENGE FOR BIOMEDICAL RESEARCH

The NIAID has been in the forefront of research into controlling new diseases that inevitably appear, diseases such as Legionnaires Disease, Toxic Shock Syndrome and now AIDS about which I wish to speak in greater detail.

Human immunodeficiency virus ("HIV"), is the cause of AIDS and now infects more than 1.5 million people in the U.S. and countless millions throughout the world. And this epidemic is growing every day. Just a few weeks ago, for example, the U.S. Surgeon General reported that AIDS could be on the threshold of "exploding" among heterosexuals as it did among homosexual men in the 1980s.

The threat posed by the AIDS virus demands immediate action on the part of the Congress and the research community to stem the spread of the infection as well as a long-term commitment to produce a vaccine and therapeutic drugs. The Institute of Medicine's ("IOM") Committee on AIDS estimated that biomedical research on AIDS will require an investment of at least $1 billion annually by 1990 and a continuing commitment over many years. Moreover, as the IOM pointed out, this investment must be in newly appropriated funds and not funds siphoned from other biomedical research efforts, because the nation's general health efforts as well as those directed against HIV need continuing progress in basic biomedical science on a broad front. We must not diminish our work on controlling the threat of other diseases while we confront this new monster in our midst.

The NIAID is the focal point at the NIH for what has become a national effort to finds ways to combat, treat and ultimately prevent any further spread of AIDS. Thanks to the work of this and other NIH Institutes, a tremendous amount has already been learned about the genetic structure and the transmission of this virus. Unfortunately, much less is still known about how it initiates the infection, how it maintains the infection, and what determines the progression and diversity of the resulting illness. To remedy these obvious gaps in our current knowledge, the IOM recommended expanded research in a number of areas including:

- Efforts to determine more fully the life-cycle and structure of HIV and to characterize all viral proteins and their interactions with cellular proteins and processes.

- Efforts to expand our knowledge of the normal functioning of the human immune system.

- Intensified efforts to define the introduction and spread of HIV in vivo, identify the reservoirs of infected cells and determine its effect on the lymphoid and central nervous system.

- Expanded investigation into the developmental biology, function and lifespan of all cells that express the CD4 molecule -- the molecule which has been implicated as the receptor for the HIV infection.

- Comprehensive immunologic and virologic analyses that will enable scientists better to evaluate potential drug therapies.

THE WORK OF THE NIAID

The urgent biomedical research needs engendered by the AIDS epidemic point directly to the research efforts being stewarded by the NIAID. The NIAID has been and will continue to be in the forefront of research efforts to study all aspects of the AIDS virus as well as other infectious agents. To perform all the research for which it has the capability, however, will require, in the judgment of professionals in the field, an increase in the NIAID's budget to $890.4 million. Such an increase would allow the Institute to fund 1,248 research grants in the area of AIDS as well as the other basic biomedical research projects in its portfolio. This funding investment will also allow the institute to increase the number of research training awards to 510, a significant increase over the 360 such awards available this year. Research training in infectious diseases has taken on a renewed importance and urgency because of the AIDS crisis, as it is extremely important to assure there is an adequate cadre of well-trained researchers that can respond to the burgeoning needs in this area.

Mr. Chairman, on behalf of the infectious diseases research community, thank you again for your support for the NIAID's work, and for biomedical research generally. We greatly appreciate your leadership.

STATEMENT OF JACQUELINE BELLANTI, CHAIR, NATIONAL COALITION ON IMMUNE SYSTEM DISORDERS

Senator **Burdick**. Our next witness is Jacqueline Bellanti, Chair, National Coalition of Immune System Disorders. Welcome to the committee.

Ms. **Bellanti**. Good morning. Thank you.

Usually I am accompanied for this testimony by individuals, but because of disease, convalescence, and difficult in traveling, they are not able to be with me today, Senator, but I would like to say it is a disappointment for me because it deprives you of the opportunity of meeting these individuals but it also sets an onus on me not only to speak for them but for the 65 million Americans who have disorders and diseases of the immune system.

The National Coalition on Immune System Disorders was organized simply to gather together the groups, both lay and professional organizations who are interested in the immune system and health and disease. These diseases range from rheumatoid arthritis to lupus to diabetes, multiple sclerosis, the immune deficiency diseases, AIDS, diseases of the lung, diseases of aging, cancer, hearing loss, and ileitis and colitis. The range of, the magnitude of these problems is, 65 million Americans have been identified with disorders or diseases of the immune system, which makes almost 1 in 4.

This committee has demonstrated a tremendous dedication to the immunology initiative, not only in supporting it but also in creating the centers for interdisciplinary research in immunologic diseases, the CIRIDS, but unfortunately the funding for those programs leaves the fact that many of the programs are being poorly funded. Recently the National Coalition established a scientific advisory board. The duties of that board were to set priorities for research in the immune system, and 14 individuals from around the United States, very noted and very renowned basic and clinical researchers, gathered together in Washington in January and presented us with a slate of priorities.

Probably the most important among them is that they identified as a society we must assure an adequate level of research for the entire family of immune system disorders, that both basic and clinical research is essential, and one major concern was the diminishing resources for training of young investigators, which leaves a large void for the future for research on the immune system.

We are currently aware of the fact that research on the immune system occurs at every of the Institutes of Health. Every one of those institutes is engaged in research on the immune system. And we feel that being able to adequately fund that research, the budget request of 7.452 for fiscal 1988 would allow these programs to have sufficient research efforts.

Unfortunately, time does not permit me to elaborate on the research findings or on the priorities, but I would be happy to make a copy of that available for the committee.

In closing, I would like to reiterate that we have for the last 5 years tried to identify that research on the immune system is our most efficient investment for the future. We know that any kind of research on the immune system, whether it is into the problem of AIDS, will certainly benefit those people with immune deficiencies, with diabetes, with lupus, so we urge this committee to continue its quest in our behalf.

Thank you for your time.

PREPARED STATEMENT

Senator BURDICK. Thank you. We did not have a copy of your testimony. Did you leave a copy with us?

Ms. BELLANTI. I left 20 of them.

Senator BURDICK. Pardon?

Ms. BELLANTI. I presented 20 copies. I will——

Senator BURDICK. Well, we will look around for one.

Ms. BELLANTI. Thank you, sir.

Senator BURDICK. Thank you. Your statement will be inserted in the record.

[The statement follows:]

STATEMENT OF JACQUELINE BELLANTI

My name of Jacqueline Bellanti and I volunteer to Chair the National Coalition on Immune System Diseases (NCISD). This organization which has 14 lay and professional groups interested in the immune system in health and disease is described in the attached brochure (attachment). These organizations are: AIDS Action Council, the American Academy of Otolaryngology-Head and Neck Surgery, The American Academy of Allergy and Immunology, American Diabetes Association, American Lung Association, Arthritis Foundation, Asthma & Allergy Foundation of America, Clinical Immunology Society, Immune Deficiency Foundation, Lupus Foundation of America, National Foundation for Ileitis & Colitis, National Multiple Sclerosis Society, The American Association of Immunologists and The American College of Allergists. We are here today to speak with one voice on behalf of research on the immune system and to encourage proper funding levels for immune system research to benefit the more that 65 million Americans who suffer with various forms of disorders of that system--from allergies and asthma to arthritis and AIDS and even cancer.

At the onset and most importantly, we commend this Committee for the support and strong commitment to research efforts in the field of immunology and we recognize that it has been through your encouragement that the immunology initiative was conceived and continues to expand. It was this Committee that created the CIRID program whose mission has been the interdisciplinary concept of basic and clinical immunology reaching out to the public with education programs and the application of research efforts for the benefit of the people. This Committee has increased the NIH budget steadily throughout the years in an attempt to meet the needs of the people who suffer from disorders of the immune system. This research will lead to early detection of disease, better management and an improved quality of life. It will allow the expansion of the knowledge of basic immunology research to be applied to clinically important diseases at the same time attempting to ease the financial and psychosocial burden of the families. As a society we must assure an adequate level of research funding for the entire family of immune system disorders. Research efforts concentrated to discover the cause and cure of AIDS will benefit all immune system disorders. The following are NCISD statements: Each of the Board of Directors of the NCISD, although representing distinct lay and professional interests, speak with one voice on behalf of the need for adequate levels of funding for research on the immune system --both basic and clinical--and the need to translate that research to the benefit of millions of Americans with disorders of the immune system. The AIDS crisis has provided a rallying flag for quick and effective research into a most devastating disease and we are confident that any research efforts in this area will benefit others disease of the immune system. The interdisciplinary approach, utilizing both the basic and clinical aspects, seems to afford the most efficient use of expertise when concentrating on the immune system. The need to involve the public for education and prevention, wellness and early detection of disease is also another common-ground we share. It has been noted that disease prevention is a much better value for the dollar than disease treatment and the cost of illness in immune system disorders annually is staggering, not to mention the diminished quality of life. The Coalition members share common concerns related to the reduced number of qualified young investigators entering the field of research in immunology. This is partly due to the low number of grants being funded and the competition for that small number. The concern that there will not be a sufficient number of qualified investigators for future research is a matter that must be addressed immediately. Because many of the diseases of the immune system are chronic, the care is long-term, at times, very expensive, and the emotional and financial stress created by these conditions adds to the complexity. The psychsocial issues for the family and the patient have ramifications which add to an already existing stressful situation. The chronic illnesses require special attention to this issues and at best, are often neglected. Support for the families are most critical and without it, recovery is often times lengthened.

The NCISD is actively engaged in advocating public awareness of immune system disorders and the need to fund research to find the cause, treatment and support as well as the education necessary to affect improvement in health and the quality of life.

The NCISD was established in 1981 to address the broad issues many organizations representing the immune system shared and to this end, in 1986, a Scientific Advisory Board was established. Basic and Clinical immunologists, from differnt speciality interest in the immune system were selected to represent their individual organization as well as look at the broader scope of the immune system and the common bonds we shared. Diseases such as arthritis, lupus, diabetes, ileitis, AIDS, asthma and allergies, lung and respiratory disorders, multiple sclerosis with a common interest in the immune system, represented by an interdisciplinary panel of experts to provide some insight and hope.

Results of the First Meeting of the Scientific Advisory Board of the NCISD

On January 14, 1987 the first meeting of the Scientific Advisory Board (SAB) of the NCISD took place in Washington, D.C. Present were representatives from the Board of the NCISD who established priorities for research efforts for immune system disorders.

"as a society we must assure an adequate level of research for the entire family of immune system disorders" Norman Talal, M.D., University of Texas Health Science Center at San Antonio, San Antonio, Texas.

"both basic and clinical research is essential; a better understanding of the basic processes of the immune system and discrimination of self from non self will allow the development of strategies that will prevent or interscept autoimmune beta cell destruction ." (as in diabetes). William E. Winter, M.D., University of Florida College of Medicine, Gainesville, Florida.

"a major concern regarding future research is the diminishing resources for the training of young investigators...number of training grants have diminished considerably... there will be insufficient young investigators to carry on our work in the future" Allen P. Kaplan, M.D., State University of New York at Stony Brook, Stony Brook, N.Y.

" Current research....and future improvements need a phase of intensive development which studies actual patients and their problems and applies potential advances in a clinical situation. This technological transfer is best accomplished in interdisciplinary clinical centers such as the current Centers in Research in Immunologic Diseases (CIRID). Current low levels of funding, however, hamper real progress in these Centers. Situations in which basic laboratory researchers and clinicians dealing with actual problems cooperate closely help to bring the latest research discoveries to a level of practical usage and are an essential part of using research to improve health." Philip S. Norman, M.D., The Johns Hopkins University School of Medicine, Baltimore, Maryland.

"as disease societies increasingly work together, we can encourage increased levels of research funding, increased basic research in immune system mechanisms, increased funding for identification of inciting infections and/or environmental agents and increased funding for understanding the mechanisms leading to inflammation and tissue destruction." Richard P. MacDermott, M.D., Univeristy of Washington Medical School, St. Louis, Missouri.

"development of vaccines for children must be continued...development of effective vaccines against such illnesses as malaria, AIDS, Hemophilus influenza infection, and rotovirus infection would save millions of children's lives throughout the world." E. Richard Stiehm, M.D., UCLA School of Medicine, Los Angeles, California.

"despite excellent progress in..the prevention of immunological disease through laboratory research...we may still be a generation removed from wide scale implementation of prevention strategies. Yet there are millions of people who already have arthritis, multiple sclerosis, diabetes and other disorders, and we should not ingore the suffering and economic and psychosocial devastation that patients, their families and society itself bear right now." John Winfield, M.D., University of North Carolina, Chapel Hill, N.C. These comments represent some of the priorities established by this Scientific Advisory Board. To accomplish these goals, the National Coalition on Immune System Disorders, a member of the Ad Hoc Group for Medical Research, supports the recommendations of a budget of $7,452 * for FY 1988 for the NIH. This increase provides funds sufficient to support research activities for a variety of programs to conduct basic and clinical research, train qualified promising investigators and translate that research and technology to the benefit of the public. This Committee has demonstrated its support by creating and

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* ($ in millions)

nuturing the immunology initiative of 1981 and to further this research initiative, the NCISD is requesting report language to assure the following:

- a critical mass of well-trained immunologists to provide necessary skills and expertise; need to provide adequate training grant support;
- encourage immunology research on the maturation of the immune system during development, fetal and neonatal host defenses against infection and disease;
- additional and separate funding for the cause, treatment, cure and education of AIDS--the major health crisis of this century;
- growth in research career awards to develop vigorous research groups at medical schools specializing in immunologic diseases;
- encouragement of clinical trials to assure the continuation of scientific application of basic research for the benefit of the public;
- support of CIRID programs (Centers for Interdisciplinary Research in Immunologic Diseases) to assure the clinical research efforts on the cause, sure and treatment through multi-disciplinary basic and clinical cooperation, of immune system disorders and to fund the core outreach components ofthe CIRIDS for education and technology transfer;
- develop emphasis on detection, treatment and prevention of colitis,ileitis, and other intestinal disorders, inflammatory bowel disease (IBD)
- support for intramural and R&D contracts to maintain all on-going efforts in respiratory, immunologic, rheumatologic and autoimmune diseases;
- encourage quick, effective use of new agents for treatment modalities: encourage FDA to consider shoter methods of efficacy;

an adequate level of research on the entire family of immune system disorders.

Research on the immune system is our best and most efficient investment for the future; breakthroughs for one disease will benefit any number of others. To support this research we need the scientists, clinicians and the financial commitment to provide hope for the more than 65 million Americans with immunologic disorders.

Thank you Mr. Chairman, Committee members for the opportunity to present before you today.

STATEMENT OF JEFFREY LEVI, NATIONAL GAY AND LESBIAN TASK FORCE

Senator BURDICK. Our next witness is Jeffrey Levi, National Gay and Lesbian Task Force.

Mr. LEVI. Thank you, Senator. My name is Jeffrey Levi. I am executive director of the National Gay and Lesbian Task Force.

Senator BURDICK. Do you have a prepared statement?

Mr. LEVI. Yes; I also had mine delivered. I have extra copies here that I can give you.

Senator BURDICK. Ms. Anderson, did you give one to her? We can follow you a little bit better that way.

Mr. LEVI. OK, I will give it to her afterward.

Senator, since my organization first testified before this committee in 1984 on the subject of AIDS, almost 18,000 more people have died of this disease. This catastrophic health crisis has often appeared to be met with indifference by the politcal leadership of the Reagan administration. Fortunately, the members of this committee have been generous in supporting AIDS-related funding for the Public Health Service.

That financial support has brought us to a point were thousands of people with AIDS can now have hope, real hope that the drug AZT will extend their lives and that they may live long enough for additional research to develop a cure. But the recent licensing of AZT is in some respects a cruel hoax for the thousands of persons with AIDS who cannot afford the $7,000 to $10,000 price tag associated with this drug. That is why we are very grateful that this committee has approved funds in the 1987 supplemental to pay for AZT or similar life-prolonging drugs for those who do not have third party payers. This will extend lives and also save the taxpayers a significant amount of money by keeping many people off Medicaid. Continuing this program in fiscal 1988 will be essential.

As you know, Senator, AZT is only a temporary intervention. We must be unrelenting in our pursuit of both a treatment and a vaccine for AIDS. Clinical trials must be expanded so that those who are ill can have the opportunity to participate in research, and so the ever-growing range of possible therapies can be tested as soon as possible. At the behest of Senator Weicker, Congress in the 1987 appropriations gave the National Institutes of Health additional funds to greatly expand the number of people in clinical trials with the hope that thousands of persons with AIDS or ARC could be participating in studies as we speak. Unfortunately, those numbers are only in the hundreds now. Fewer than 500 people are in clinical trials. We urge this committee in its report language to direct the NIH to move with greater speed in expanding trial of drugs and increasing dramatically the number of people participating in them.

Until the cure and vaccine are developed, our only intervention for halting the spread of AIDS is education, and yet we are spending less on this effort than companies would spend to change consumer buying habits or some politicians would spend on changing the votes of a small portion of the electorate. Other countries have already undertaken massive education campaigns, while in the United States these programs are still on the drawing boards more and more people are becoming infected with the HIV virus.

Our AIDS effort is also faltering in the area of testing and counseling. The Public Health Service recommends HIV antibody testing for millions of Americans. At the same time, however, the PHS has failed to provide the testing sites and counseling services to meet the demand that they have created. Additional funds must be provided for testing and the counseling that makes such a program worthwhile.

PREPARED STATEMENT

Senator, time and space do not permit detailing all the research and prevention areas that need additional funding. I commend to you the legislative package of the AIDS Action Council, that calls for approximately $1 billion in research, prevention, and treatment spending in the next fiscal year. As a useful map toward reaching the goal so clearly outlined by the National Academy of Sciences report on AIDS, which argues that we need to be spending $2 billion on research and prevention by 1990. We urge this committee to adopt this approach. Thank you very much, Senator.

[The statement follows:]

STATEMENT OF JEFFREY LEVI

Mr. Chairman, since my organization first testified before this committee in 1984 on the subject of AIDS, almost 18,000 more people have died of this disease. The spread of AIDS and HIV infection continues—seemingly unrelentingly. This catastrophic public health crisis has often appeared to be met with indifference by the political leadership of the Reagan Administration. Fortunately, the members of this committee have been there to fill the void. You have been generous in your support of AIDS-related funding for the Public Health Service—recognizing that the scientists and educators need resources to solve this mystery, not empty rhetoric.

That financial support has brought us to a point where thousands of persons with AIDS can have hope—real hope that the drug AZT will extend their lives and that they may live long enough for additional research to develop a cure. But the FDA's recent licensing of AZT is a cruel hoax for the thousands of persons with AIDS who cannot afford the $7-10,000 annual price tag associated with this drug. For many who were receiving AZT free of charge before it was licensed, a treatment that has been proven effective in prolonging life is now being withheld simply because they can't afford it.

This is both a medical and a fiscal emergency: a medical emergency because thousands may die prematurely because they can't afford this drug; a fiscal emergency for governments because for many the solution will be to bankrupt themselves to become eligible for Medicaid—and thus be able to resume treatment with AZT. This would be a fiscal nightmare for the government—which would then have to take on an even larger share of the medical costs associated with AIDS.

The humane solution is for the federal government to purchase AZT for those individuals not covered by Medicaid or private health insurance that pays for prescription drugs. This would assure life prolonging therapy and keep some people off Medicaid—saving the government money in the long run.

This is an emergency situation that requires immediate action. I fear, Mr. Chairman, that even waiting for the next fiscal year will be too long--thousands will be forced off AZT or prevented from starting therapy and will die as a result. Therefore, I hope that you will support efforts under way to provide funds in the 1987 supplemental appropriation as well as the 1988 appropriation to pay for AZT for those who do not have the means or third-party payment plans.

As you know, Mr. Chairman, AZT is only a temporary intervention. We must be unrelenting in our pursuit of both a treatment and a vaccine for AIDS. Significant strides have been made in this regard, and we know that this committee will give the scientific community the resources it needs to meet these goals and reject the minimalist approach of the Office of Management and Budget.

For example, clinical trials must be expanded so that those who are ill can have the opportunity to participate in research and so the ever-growing range of possible therapies can be tested as soon as possible. At the behest of Senator Weicker, Congress, in the 1987 appropriation, gave the National Institutes of Health additional funds to greatly expand the number of people in clinical trials—with the hope that thousands of persons with AIDS or ARC could be participating in studies as we speak. Unfortunately, those numbers are only in the hundreds now--and we urge this committee to direct the NIH to move with greater speed in expanding trials of drugs and increasing dramatically the number of people participating in them.

We must also begin to work on earlier interventions against AIDS--studying the effect of drugs on those who are asymptomatic carriers of the HIV so we can find a means to stop this disease much earlier in its course. At the moment few if any studies are under way in this category and we ask that the committee urge NIH to move forward in this area more rapidly.

Until the cure and vaccine are developed, our only intervention for halting the spread of AIDS is education. In this area, the federal response has been particularly appalling. In the current fiscal year, less than $80 million is allotted to this goal. It rises to $120 million in the President's budget request. A sum triple that size would come closer to the need.

AIDS prevention requires mass education—about a frightening disease that requires millions of Americans to make dramatic changes in their lifestyles. And yet, we are spending less on this effort than companies would spend to change consumer buying habits—or politicians would spend on changing the votes of a small portion of the electorate. Other countries have already undertaken massive education campaigns while in the United States these programs are still on the drawing boards—as more and more people are becoming infected with the HIV. To give a concrete example, the British government has already begun a $30 million media advertising campaign--$30 million for advertising alone in a country a fraction the size of the United States and with very few AIDS cases. A proportional amount spent in the United States would require more than the entire education budget proposed by the Administration.

Our AIDS effort is also faltering in the area of testing and counseling. The Public Health Service recommends HIV antibody testing for millions of Americans—a policy we question, but one that has increased dramatically the demand for testing. At the same time, however, the PHS has failed to provide the testing sites and counseling services to meet the demand that they have created. Backlogs at testing sites are considerable—as long as two months in some cities. Concerned individuals anxious to learn about AIDS should not have to wait that long to receive the counseling they need to prevent further spread of AIDS. This is a program that cannot be undertaken on the cheap: testing is only as useful as the counseling about behavior change that is associated with it—for people who are positive and negative. Good counseling about a life threatening disease can take a good deal of time and effort by trained professionals. Nothing short of such an approach will make a testing program effective in halting the spread of AIDS.

Mr. Chairman, time and space do not permit detailing all the research and prevention areas that need additional funding. I commend to you the legislative package of the AIDS Action Council—prepared in consultation with numerous public health and medical organizations. It calls for approximately $1 billion in spending on research, prevention and treatment in the next fiscal year. It is a useful map toward reaching the goal so clearly outlined for us by the National Academy of Sciences/Institute of Medicine report on AIDS, which argues that we need to be spending $2 billion on research and prevention by 1990. We urge this committee to adopt this approach.

The community I represent, Mr. Chairman, is grateful for the leadership this committee has shown on this issue. I opened my statement by speaking about the thousands who have died in the last three years. Please join in the fight to make sure that more people do not have to know the suffering that is associated with this disease.

Thank you very much.

SUBCOMMITTEE RECESS

Senator BURDICK. Thank you very much.

The subcommittee will stand in recess until 2:30 this afternoon, when it will convene to hear public witnesses on the National Institutes of Health in this room here. Until that time we will be in recess.

[Whereupon, at 11:50 a.m., Wednesday, May 6, the subcommittee was recessed, to reconvene at 2:30 p.m., the same day.]

(AFTERNOON SESSION, 2:40 P.M., WEDNESDAY, MAY 6, 1987)

The subcommittee met in room SD-138, Dirksen Senate Office Building, Hon. Tom Harkin presiding.

Present: Senators Proxmire, Harkin, and Specter.

NONDEPARTMENTAL WITNESSES

Senator HARKIN. The subcommittee on Labor, Health and Human Services will come to order. This afternoon we will continue the public witness hearings. Following the testimony of Senator Matsunaga we will focus on the programs under the jurisdictions of the National Institutes of Health.

Let me apologize for being a little late, especially to my esteemed colleague and dear friend, Senator Matsunaga. I apologize very deeply for being here so late and holding you up from your own busy schedule. Let me state for the record that there is no one—I know when I served with Senator Matsunaga in the House and then later was privileged to serve with him here in the Senate, there has been no one that has been more dogged and tireless in his efforts to bring to fruition an idea and a concept that he has had for so many years, the National Institute of Peace.

There is one person responsible for the fact that we do have a National Institute of Peace finally in legislation and growing and building, and that is Senator Matsunaga from Hawaii, and we are very proud of you, Sparky. Please proceed.

STATEMENT OF HON. SPARK MATSUNAGA, U.S. SENATOR FROM HAWAII

Senator MATSUNAGA. Thank you very much. I appreciate your kind remarks. Mr. Chairman, as the author and principal sponsor of legislation which created the U.S. Institute of Peace, I appreciate this opportunity to testify before your subcommittee in support of the Institute's request for a $10 million appropriation for fiscal year 1988.

When I was elected to the 88th Congress as a freshman Member of the other body, one of the first bills I introduced was a bill to establish a U.S. Academy of Peace. I was unable to obtain any action on the measure, not even a committee hearing in that Congress, or in the nine following Congresses in which I continued to introduce the same bill.

It was not until October 19, 1984, after a 22-year effort on my part, that the measure was finally signed into law, not as a separate bill, but as an amendment to the Defense Department authorization bill for fiscal 1985.

This route was taken upon the advice and assistance of the distinguished Senator from Oregon, Mr. Mark Hartfield, and the then senior

Senator from West Virginia, Mr. Jennings Randolph, because the President had indicated that he would veto any bill providing for new programs including a Peace Institute.

Now that the administration has resigned itself to carry out the mandates of the law and the U.S. Peace Institute has been established, I thought members of this subcommittee might be interested in this bit of unusual legislative history of the Institute.

Although still lacking one member, the 15 member governing Board of Directors was sworn in in February 1986, and has been meeting regularly ever since. Section 1705(c) of the U.S. Institute of Peace Act provides that the Institute may undertake extension and public outreach by entering into grants contracts with institutions of postsecondary community, secondary and elementary education with public and private educational training and research institutions, including the AFL–CIO, with libraries and with public departments and agencies such as a State Department of Education.

Congress further provided that one-fourth of the Institute's annual appropriation must be passed through to such nonprofit and official public institutions. In order to meet this congressional mandate, the Institute's Board spent a good part of its first year setting up a procedure for receiving and reviewing grant applications for research projects.

By March of this year, over $1 million in grants had been awarded to 37 recipients. It should be noted that the Institute received 183 grant applications totaling $18 million between July 1986 when its grant procedure was announced, and March of this year. By the end of this fiscal year, it is estimated that only about 20 percent of the grant applications received can be funded.

An increase in the Institute's appropriations would permit increased funding of some very valuable peace research projects. Moreover, it is my hope that an increase in appropriations would also permit a more realistic level of funding for institutional programs such as those launched by statewide public university systems in several States including Hawaii and Iowa.

Such programs will require grants in the amount of at least $100,000 to $300,000 during their formative years. I hope that the Institute will be able to award 8 or 10 of such grants to nonprofit and official public institutions annually in addition to smaller grants for individual research projects.

During its first year the Institute of Peace also established the Jennings Randolph Program for International Peace and announced the appointment of the program's first eight fellows earlier this year.

Under the aegis of the Institute, this program is designed to train leaders and potential leaders and scholars from the United States and other countries in the art of peacemaking through a maximum study period of 2 years.

The Institute has also launched its own research program compiling an intellectual and program map of the international peace field. Mr.

Chairman, these are commendable achievements accomplished during the first 14 months, and the Institute has even more ambitious plans for the next fiscal year.

Among other things, it is planning to develop a television series on United States-U.S.S.R relations, teaching materials for the high school level, seminars for negotiators, a regular newsletter about its activities, and an annual State of the World Peace Report.

There are a number of other projects that the Institute could undertake to develop innovative methods of peacekeeping, but if these proposals are to become reality, the Institute must have appropriations much closer to the level of its authorized $10 million a year.

In closing, Mr. Chairman, I would like to say that I believe congressional support for the Peace Institute is as strong today as it was in 1984. It is rare for 60 Senators to cosponsor any bill, but that is the number who cosponsored the U.S. Institute of Peace Act to extend the Institute's authorization in 1986. The Institute needs this type of support, and it needs the oversight and the recommendation for future improvement that Congress can provide through its legislative and appropriations committees.

PREPARED STATEMENT

I greatly appreciate the interest that members of this subcommittee have taken in the Institute and urge the approval of the Institute's request for $10 million for fiscal year 1988 so that we as Americans can proudly and rightfully claim that the United States is still the world leader for peace among all nations and all peoples. Thank you very much, Mr Chairman. I appreciate your kindness.

STATEMENT OF SENATOR SPARK MATSUNAGA

Mr. Chairman, as the author and principal sponsor of legislation which created the U.S. Institute of Peace, I appreciate this opportunity to testify before your subcommittee in support of the Institute's request for a $10 million appropriation for fiscal year 1988.

When I was elected to the 88th Congress as a Member of the other body, one of the first bills I introduced was a bill to establish a U.S. Academy of Peace. I was unable to obtain any action on the measure, not even a committee hearing, in that Congress or in the nine following Congresses in which I continued to introduce the same bill. It was not until October 19, 1984, after a 22-year effort on my part that the measure was finally signed into law, not as a separate bill, but as an amendment to the Defense Department authorization bill for fiscal 1985. This route was taken upon the advice and assistance of the distinguished Senator from Oregon, Mr. Hartfield, and the senior Senator from West Virginia, Mr. Randolph, because the President had indicated that he would veto any bill providing for new programs, including a Peace Institute.

Now that the administration has resigned itself to carry out the mandates of the law and the U.S. Peace Institute has been established, I thought members of this subcommittee might be interested in this bit of unusual legislative history of the Institute. Although still lacking one member, the 15-member governing Board of Directors was sworn in February 1986 and has been meeting regularly ever since.

Section 1705(c) of the U.S. Institute of Peace Act provides that the Institute may undertake extension and public outreach by entering into grants and contracts with institutions of postsecondary, community, secondary, and elementary education, with public and private educational, training, and research institutions, including the AFL-CIO, with libraries, and with public departments and agencies, such as a State Department of Education. Congress further provided that one-fourth of the Institute's annual appropriation must be passed through to such nonprofit and official public institutions. In order to meet this congressional mandate, the Institute's Board spent a good part of its first year setting up a procedure for receiving and reviewing grant applications for research projects. By March of this year, over $1 million in grants had been awarded to 37 recipients. It should be noted that the Institute received 183 grant applications totaling $18 million between July 1986, when its grant procedure was announced, and March of this year. By the end of this fiscal year, it is estimated that only about 20 percent of the grant applications received can be funded.

An increase in the Institute's appropriation would permit increased funding of some very valuable peace research projects. Moreover, it is my hope that an increase in appropriations would also permit a more realistic level of funding for institutional programs such as those launched by statewide public university systems in several States including Hawaii and Iowa.

Such programs will require grants in the amount of at least $100,000 to $300,000 during their formative years, and I hope that the Institute will be able to award 8 or 10 grants of that size to nonprofit and official public institutions annually, in addition to smaller grants for individual research projects.

During its first year, the Institute of Peace also established the Jennings Randolph Program for International Peace, announcing the appointment of the program's first eight fellows earlier this year. Under the aegis of the Institute, this program is designed to train leaders and potential leaders and scholars from the United States and other countries in the art of peacemaking through a maximum study period of 2 years.

The Institute has also launched its own research program, compiling an intellectual and programmatic map of the international peace field.

Mr. Chairman, these are commendable achievements accomplished during the first 14 months and the Institute has even more ambitious plans for the next fiscal year. Among other things, it is planning to develop a television series on United States-U.S.S.R relations, teaching materials for the high school level, seminars for negotiators, a regular newsletter about its activities, and an annual State of the World Peace Report. There are a number of other projects that the Institute could undertake to develop innovative new methods of peacekeeping, but, if these proposals are to become reality, the Institute must have an appropriation that is much closer to the level of its authorization of $10 million.

In closing, I would like to say that I believe congressional support for the Peace Institute is as strong today as it was in 1984. It is rare for 60 Senators to cosponsor any bill but that is the number who cosponsored the U.S. Institute of Peace Act to extend the Institute's authorization in 1986. The Institute needs this type of support and it needs the oversight and the recommendation for future improvement that Congress can provide through its legislative and appropriations committees. I greatly appreciate the interest that members of this subcommittee have taken in the Institute and urge the approval of the Institute's request for $10 million for fiscal year 1988, so that we as Americans can proudly and rightfully claim that the United States is still the world leader for peace among all nations and all peoples.

Thank you very much.

Senator HARKIN. Senator Matsunaga, thank you very much. I was noticing on our mark that the President's budget has $3.3 million in their request. According to your testimony what you are saying is you think that in light of the number of projects and applications that have come in, this amount will not be enough to fund deserving projects, and that we need closer to $10 million?

Senator MATSUNAGA. That is correct, Mr. Chairman. For some reason we have not been able to convince people in the White House that the Institute is now a working organization. It has now many programs under its plans and it can go forward by an amount closer to the fully authorized $10 million.

Senator HARKIN. Senator, you—Let me just ask you this. I have been following this also on the Appropriations Committee, and as of the last hearing we had involving the Institute, not one of the Institute's Board members was a woman, and if I am not mistaken not one was a minority.

Senator MATSUNAGA. Not one is a woman, not one is a minority. I have written a number of times to the President asking that he nominate and send to the Senate for confirmation the name of the 15th member of the Board. I leave it to his discretion whether it be a woman. Although I have strongly urged that that 15th member be a woman and a minority member.

There are at least three vacancies which will be occurring due to the expiration of the terms of those who were appointed for the 3- or 4-year term I believe. They are nominated for different lengths of time in order to overlap each other.

Senator HARKIN. So those will be coming up?

Senator MATSUNAGA. Right. As a matter of fact, the President, President Reagan, was required under the law to nominate—send names of nominees to the Senate by April 20, 1985, but he did not do it until August. The first nominees were sent in August 1985, only after I threatened a court suit to bring a writ of mandamus. They immediately complied.

Senator HARKIN. I don't think there is any question, but that the U.S. Peace Institute will move forward as long as it has Senator Matsunaga as its watch dog. It is going to move ahead. I assure you, Sparky, we are going to do our best here to get the funding it needs to keep going.

Senator MATSUNAGA. I appreciate it. Thank you.

Senator HARKIN. We will now move onto the witnesses on the jurisdiction of the National Institute of Health. This week the subcommittee will hear testimony from over 200 witnesses, and because of the large number of witnesses we must request each witness keep the oral testimony brief, and your full statement will be included in the record.

To help us keep on schedule, when the red light goes on your 3 minutes have expired. I wish we had a yellow light to give you caution, but we do not have that. We need to do this to give each witness a fair and equal opportunity.

Our first witness this afternoon will be Dr. J. Alfred Rider, president of the Children's Brain Diseases.

STATEMENT OF J. ALFRED RIDER, M.D., PRESIDENT, CHILDREN'S BRAIN DISEASES

Dr. RIDER. Thank you very much. I am Dr. J. Alfred Rider, president of the Children's Brain Diseases Foundation, and I speak specifically here today with request to research funds on Batten's disease. Batten's disease is a neurological disorder which has an instance as high as 1 in 12,500 births. It is probably the most common type of neurogenetic storage disease in children. Although there are several types, the usual disease manifests itself in previously normal children at the age of 5 to

10 and is characterized by slow progression of clumsiness, stumbling, failure of vision, seizures, changes in personality. The disease is eventually totally disabling, unable to care for themselves, usually ends in death in late teens or twenties, rarely into the thirties.

The changes which occur in the brains of these children are quite similar to some of the changes in the aging person, thus effective treatment for Batten's disease may also allow us to alter the aging process of senility in all humans.

The basic cause of the disease may be related to a defect in a peroxidase enzyme system in the brain. In the last year, significant advances in research have been made. We can now diagnose the disease by amniocentesis and a relatively simple blood test appears to be diagnostic with respect to the disease and carriers. Research is now being directed toward getting additional evidence and proofs of these techniques will be generally available to the public.

Research must be directed not only to prevention, but also to treatment. It would appear that gene splicing techniques and also that agents designed to block the accumulation of the abnormal enzyme and produce or enhance its degradation could be effective.

We have always supported the budget presented by the National Institute of Neurological and Communicative Disorders and Stroke. We are very pleased that your committee recommended last year an appropriation of $487 million, which is $87 million more than the administration request.

The following wording appeared in the 1987 Senate appropriation bill:

> The committee, in the past, has requested the NINCDS to increase its research efforts for Batten's disease. The committee requests that a report on Batten's disease, including the amount of research supported during fiscal year 1987 and progress being made, be submitted before the NINCDS presents its fiscal year 1988 budget request.

We were, therefore, distressed to be informed that only one small grant in the amount of $78,000 for a study in sheep in New Zealand was funded in 1986.

Thus, we recommend that the above wording be adopted in this year's appropriation bill and to this be added:

> The committee is concerned upon learning that in spite of last year's recommendation requesting research on Batten's disease that little research was funded in 1987. Therefore, it further requests that the National Institute of Neurological and Communicative Disorders and Stroke actively solicit applications for grants of quality for Batten's disease and to fund up to $1 million per year for 5 years for research on Batten's disease.

PREPARED STATEMENT

This is a small price to pay for a disease which is draining our national financial resources to the tune of approximately $250 million per year. If these funds are provided, the chance for development of a specific treatment program in the near foreseeable future appears to be excellent. Thank you very much.

[The statement follows:]

STATEMENT OF J. ALFRED RIDER

I am Doctor J. Alfred Rider, President of the Board of Trustees of the Children's Brain Diseases Foundation. It is a pleasure to testify before the Senate Subcommittee on Labor, Health and Human Services, Education and Related Agencies Appropriations and support the requests of the National Institute of Neurological and Communicative Disorders and Stroke.

I speak today specifically with reference to research funding for Batten's disease. This is a neurological disorder which has an incidence as high as 1 in 12,500 births, similar to other genetic disorders. It is probably the most common neurogenetic storage disease in children.

Although there are several sub types, the usual disease manifests itself in previously normal children at the approximate age of 5 to 10 and is characterized by a slow progression of clumsiness, stumbling and failure of vision, seizures, changes in personality and dropping of scholastic grades. The disease eventually leaves them totally disabled and unable to care for themselves and usually ends in death in the late teens or early twenties and rarely in the thirties.

One of the most promising theories about the disease has resulted from the discovery of an abnormality in a peroxidase enzyme system in the brains of children with Batten's disease. This results in an accumulation of a yellow pigment, ceroid lipofuscin, in the brain cells producing slow destruction and progressive deterioration. These changes are quite similar to the changes that take place in all brains as they age. Thus, effective treatment for Batten's disease might delay the normal aging process.

Recent studies seem to indicate that there are four or five sub types of Batten's disease each having a specific enzyme abnormality. In the last year, significant advances in research have been made. Batten's disease has been diagnosed by amniocentesis and a relatively simple blood test appears to be diagnostic in respect to those with the disease and carriers. Research is now being directed toward getting additional evidence and proof so these techniques will be generally available to the public.

Research must be directed toward not only prevention, but also treatment.

It would appear that gene splicing techniques and also that agents designed to block the accumulation of the abnormal enzyme and produce or enhance its degradation could be effective.

Additional studies have also been done on the Koppang dogs and in sheep which have a disease similar to Batten's disease in humans.

In order to further world wide recognition of this disease, I presented a paper entitled Batten's disease at the Age Pigments Conference in Italy in June 1985. The proceedings of the conference will soon be published by Pergamon Press. There was also an international conference on Batten's disease at the Institute for Basic Research in Developmental Disabilities in Staten Island, New York, April 30 and May 1, 1987, wherein there were more than twenty five participants from all over the world who brought up to date the recent advances and research on Batten's disease.

The Children's Brain Diseases Foundation is doing the best it can to stimulate research on Batten's disease. For example, we are in the process of assisting with the development of two Batten's disease centers, one at the University of Indiana and one at the Institute for Basic Research in Developmental Disabilities in New York.

Unfortunately, our abilities to raise money from private sources are limited, and the major monies must come from the NIH. There are over forty seven principal investigators from major universities, medical centers and institutes throughout the world interested in various phases of research pertaining to Batten's disease. (See Addendum A.) These researchers are in dire need of monies to continue their work.

We have always supported the budget presented by the National Institute of Neurological and Communicative Disorders and Stroke. We were very pleased that your Committee recommended an appropriation of $487,218,000 for fiscal year 1987 which is $87,867,000 more than the administration request and $74,194,000 more than the fiscal year 1986 adjusted appropriation of $431,024,000.

However, in spite of wording in the 1987 Senate Appropriation Bill namely:

> "The Committee, in the past, has requested the NINCDS to increase its research efforts for Batten's disease. The Committee requests that a report on Batten's disease, including the amount of research supported during fiscal year 1987 and progress being made, be submitted before the NINCDS presents its fiscal year 1988 budget request."

Therefore, we are distressed to be informed that only one small grant in the amount of $78,500 for a study in sheep by Doctor Jolley in New Zealand was funded in 1986.and also to find in the report on the status of Batten's disease prepared by the NINCDS which states that it estimates it will spend approximately $250,000 during fiscal year 1987. Apparently, no monies have yet been expended, and even if there were, this amount is woefully small. (See Addendum B.)

Thus, we recommend that the same wording be adopted in this year's appropriation bill and to this be added:

> "The Committee is concerned upon learning that in spite of last year's recommendation requesting research on Batten's disease that little research was funded in 1987. Therefore, it further requests that the National Institute of Neurological and Communicative Disorders and Stroke actively solicit applications for grants of quality for Batten's disease and to fund up to $1,000,000 per year for five years for research on Batten's disease."

This is a small price to pay to solve a disease which is draining our national financial resources to the tune of approximately 250 million dollars per year based on 3.7 million babies born in 1986; 300 born with Batten's disease and at a treatment and maintenance cost of $50,000 per year per life time of a child.

If these funds are provided, the chances of the development of a specific treatment program in the near forseeable future appear to be excellent.

Summary of Recommendations

Batten's disease is a neurological disorder which may have an incidence as high as 1 in 12,500 births. It is probably the most common type of neurogenetic storage disease in children. Although there are several sub types, the usual disease manifests itself in previously normal children at the approximate age of 5 to 10 and is characterized by a slow progression of clumsiness, stumbling and failure of vision, seizures, changes in personality and dropping of scholastic grades. The disease eventually leaves them totally disabled and unable to care for themselves and usually ends in death in the late teens or twenties and rarely, into the thirties. The changes which occur in the brain in these children are quite similar to many of the changes in the aging person. Thus, effective treatment for Batten's disease may also allow us to alter the aging process of senility in all humans.

The basic cause of the disease may be related to a defect in a peroxidase enzyme system in the brain. In the last year, significant advances in research have been made. Batten's disease has been diagnosed by amniocentesis and a relatively simple blood test appears to be diagnostic in respect to those with the disease and carriers. Research is now being directed toward getting additional evidence and proof so these techniques will be generally available to the public.

Research must now be directed toward not only prevention, but also treatment.

It would appear that gene splicing techniques and also that agents designed to block the accumulation of the abnormal enzyme and produce or enhance its degradation could be effective.

We have always supported the budget presented by the National Institute of Neurological and Communicative Disorders and Stroke. We were very pleased that your Committee recommended an appropriation of $487.2 million for fiscal year 1987 which is $87.8 million more than the administration request.

ADDENDUM A

1. Doctor Donald Armstrong
   Kuwait University, Faculty of Allied Health Sciences and Nursing
   - Relationships of Peroxidase to Batten's disease
   - Canine Retinal Degeneration: An Approach to Therapy
   - Peroxidase Deficiency and Peroxidase Regulating Enzyme
   - Peroxidase Activity in Human and Canine Ceroid-lipofuscinosis, with Special Emphasis on the Eye

2. Doctor Robert J. Baumann
   Department of Neurology
   University of Kentucky and Section on Epidemiology OBE, Office of the Director, NINCDS, Bethesda, Maryland
   - Leukocyte Ultrastructure

3. Doctor M. J. Bennett
Sheffield, UK
Batten's disease: A Previously Unrecognized Dyslipoproteinaemia

4. Doctor Milton Brightman
Lab. of Neuropathology and Neuroanatomical Sciences, NINCS & National Institutes of Public Health/Department of Health and Human Services
Transport of Horseradish Peroxidase Across Blood Brain Barrier

5. Doctor S. Carpenter
Montreal, Canada
Biopsy Diagnosis in the Varieties of Ceroid-lipofuscinosis--Criteria and Pitfalls

6. Doctor Glyn Dawson
Associate Professor, Departments of Pediatrics & Biochemistry, The University of Chicago
Pre-Natal Diagnosis and Enzyme Replacement Therapy
Approaches to the Detection of Neuronal Ceroid lipofuscinosis in Cultured Skin Fibroblasts
Abnormal Cathepsin Activity in Batten's disease

7. Doctor T. L. Dormandy
Whittington Hospital, London
Free Radicals and Lipopigments

8. Doctor Edward Dratz
Department of Chemistry, Montana State University
Measurement of Fluorescent Lipopigment, Peroxidized Fatty Acids, Vitamin E, Effects of Antioxidants on Lipopigment Formation

9. Dr. P. R. Dyken
Mobile, Alabama
Reconsideration of the Entity of Ceroid-lipofuscinosis (NCL). Is it a Disease or a Syndrome?

10. Doctors Graig E. Eldred and Martin L. Katz
University of Missouri School of Medicine
Lipofuscinogenesis in the Retinal Pigment Epithelium

11. Dr. Y. Eto
Tokyo, Japan
A Clinical and Biochemical Exploration of Neuronal Ceroid-lipofuscinosis in Japanese Patients

12. Doctor R. M. Gardiner
John Radcliffe Hospital, Oxford, England

13. Doctor Paul Glees
University of Cambridge, Anatomy School, Cambridge
Electron Microscopic Studies on Neuronal Lipofuscin:Accumulation and Removal
The Effects of Centrophenoxine in the Central Nervous System

14. Doctors Hans H. Goebel and E. Dahme
Division of Neuropathology, University of Gottingen
The Ultrastructural Spectrum and Diversity of Lipopigments in the Neuronal Ceroid-lipofuscinosis
Neuronal Ceroid-lipofuscinosis in the Dalmatian--a New Animal Model for Human Neuronal Ceroid-lipofuscinosis

15. Doctor John M. C. Gutteridge
Division of Antibiotics, National Institute for Biological Standards and Control, Holly Hill, Hampstead, London
Fluorescent Products of Phospholipid Peroxidation: Formation and Inhibition on Model Systems

16. Doctor N. A. Hall
London, UK
Accumulation of Dolichol-linked Oligosaccharides in Ceroid-lipofuscinosis

17. Doctor Egill Hansen
Department of Opthalmology, Rikshopitalet, The National Hospital, University of Oslo, Norway
The Significance of Psychophysical and Electrophysical Methods in the Diagnosis of Juvenile Neuronal Ceroid-lipofuscinosis

18. Doctor Ann Harden
Department of Clinical Neurophysiology, the Hospital for Sick Children, London
Neurophysiological Studies in Children with so-called Neuronal Ceroid-lipofuscinosis

19. Doctor Denham Harman
The University of Nebraska Medical Center
Brain Lipid Composition

20. Doctor K. U. Ingold
Associate Director, National Research Council of Canada, Division of Chemistry
Resistance to Oxidation and the Natural Antioxidant Levels in Membranes from Human Cells

21. Doctor Gunde Egeskov Jensen
The Laboratory of Biochemistry and Toxicology, the Institute of Biology and Chemistry, University of Roskilde, Denmark
Glutathione Peroxidase Activity in Leucocytes, Erythrocytes and Serum from Juvenile Form of Neuronal Ceroid-lipofuscinosis

22. Doctor R. D. Jolly
Department of Veterinary Pathology and Public Health, Massey University, Palmerston North, New Zealand
Ceroid-lipofuscinosis: The Ovine Model Studies on Mannosidosis and Ceroid-lipofuscinosis in Cattle, Sheep and Dogs

23. Doctor Edwin Kolodny
Associate Director, Eunice Kennedy Shriver Center of Mental Retardation, Inc., Waltham, Massachusetts
Pathogensis of the Neuronal Ceroid-lipofuscinosis
The Clinical Classification of Neuronal Ceroid-lipofuscinosis Subtypes

24. Doctor Nils Koppang
Veterinaerinstuttet, Oslo, Norway
Histochemical Evidence of Lipid Peroxidation in Canine Ceroid-lipofuscinosis
The English Setter with Ceroid-lipofuscinosis: A Suitable Model for the Juvenile Type of Ceroid-lipofuscinosis in Humans

25. Doctor P. M. MacLeod
Kingston, Canada
The Prenatal Diagnosis of Jansky-Bielschowsky Disease During the Second Trimester

26. Doctor Martin Maltempo
Assistant Professor of Physics, University of Colorado Medical Center
Monitoring of Peroxidase and Free Radicals in Canine Retinal Tissue Subject to a Degenerative Disease in which there is an Accumulation of Pathologic Lipopigments of the Ceroid Type: A Model for Batten's disease

27. Doctor Jaime Miguel
NASA, Ames Research Center, Moffet Field, CA
Analysis of Pigment Lipofuscin

28. Doctor Sakkubai Naidu
Baltimore, MD
Selenium Therapy in Ceroid-lipofuscinosis

29. Doctor Erling Gronvold Olsen
University Eye Department, Rikshospitalet, University of Oslo
Fluoreacein Angiography in Ceroid-lipofuscinosis

30. Doctor D. Palmer
Palmerston North, New Zeland
Chemical Analysis of Isolated Pigments from Ovine Ceroid-lipofuscinosis

31. Doctor Vital Patel
Assistant Professor of Pathology, Indiana University School of Medicine
Antioxidant Treatment of Batten's Disease

32. Doctor Alan K. Percy
Associate Dean, Office of Research, Charles R. Drew Postgraduate Medical School, Los Angeles
Salutory Effect of Selenium, Erythrocyte Glutathione Peroxidase

33. Doctor Michel Philippart
Neuropsychiatric Institute, University of California, Los Angeles
Treatment of Batten's disease with Antioxidants
Diagnosis and Treatment of Typical and Atypical Forms of Ceroid-lipofuscinosis

34. Doctor Mark Poznansky
Associate Professor of Pathology, University of Alberta
Enzyme Replacement and Enzyme Engineering

35. Doctor Raju Pullarkat
New York State Institute for Basic Research in Mental Retardation, Staten Island, New York
Lipopigments in Aging and in Ceroid-lipofuscinosis
Docosahexaenoic Acid Levels in Brains of Various Forms of ceroid-lipofuscinosis
Oligosaccharyl Diphosphodolichols in Ceroid-lipofuscinosis

36. Dr. P. Santauori
Helinski, Finland
Fifteen Years Experience with Antioxidant Therapy in the Treatment of NCL Disorders

37. Doctor Julius Schultz
Director, Pananicolaou Center Research Institute, Miami,Florida
Discovery and Characteristics of Leukocyte Peroxidase and the Purification and Administration to Animals

38. Doctor Gunther Schwendemann
Division of Neuropathology, University Hospita Eppendorf, Hamburg
Diagnosis of Juvenile Ceroid-lipofuscinosis by Electron Microscopy of Lymphocytes and of Rectal, Skin and Sural Nerve Biopsy Tissue

39. Doctor A. N. Siakotos
Professor of Pathology, Indiana University Medical Center
Development of a Reliable Blood Test for Batten's disease
Recent Developments in the Isolation and Properties of Auto-Fluorescent Lipopigments
The Neuronal Ceroid-lipofuscinosis: New Biochemical Findings

40. Doctor P. E. Spoerri
Department of Histology and Neuroanatomy, University of Gottingen
Ultrastructural Age Changes in Neurons and Myocardium in Culture
The Effects of Centrophenoxine on Age Pigment

41. Doctor S. K. Srivastava
Department of Human Biological Chemistry & Genetics, The University of Texas Medical Branch
Purification and Properties of Leukocyte Peroxidase
Biochemical Studies in Neuronal Ceroid-lipofuscinosis

42. Doctor Al Tappel
Division of Food Science & Technology, University of California, Davis
Properties and Functions of Glutathione Peroxidase and Pentane Analysis of Lipid Peroxidation Damage to Quantitate Effects in Nutrition

43. Doctor T. Westermarck
Rinnekoti Institution for the Mentally Retarded, Espoo, Institute of Radiation Protection, Helsinki, Finland
Sodium Selenite Absorption and Losses in Spielmeyer-Sjogren Type of Neuronal Ceroid-lipofuscinosis (Batten's disease) Using Total Body Counting for 75 SE Detection
Studies on the Effects of Selenium Administration to Neuronal Ceroid-lipofuscinosis Patients with Special Refernce to Reduced Glutathione
Elemental Profiles of Blood Cells in NCL. Is Iron Involved in the Pathogenesis of NCL?

44. Doctor John R. Wherrett
Professor of Neurology Program, University of Toronto
Isolation of Fluorescent Material in the Juvenile Form of Batten's disease

45. Dr. H. M. Wisniewski
New York State Office of Mental Retardation and Developmental Disorders, Staten Island, NY
Lipofuscin in Aging

46. Doctor Leon Wolfe
Hopital Neurologique de Montreal, Montreal Neurological Hospital
Characterization of the Accumulated Retinal Compounds in Batten's disease
An Analysis of Urine Sediment in Subjects with Batten's disease
New Findings on Abnornmalities of Dolichol and Dolichol Phosphates in Ceroid-lipofuscinoses and Relationships to Lysosomal Membrane Turnover

47. Dr. C. E. Wright
New York State Office of Mental Retardation and Developmental Disorders, Staten Island, NY
Altered Taurine Transport in Ceroid-lipofuscinosis

ADDENDUM B

BATTEN DISEASE

INTRODUCTION

In its report on the Fiscal Year 1987 budget for the Department of Health and Human Services, the Committee on Appropriations stated:

> "The Committee, in the past, has requested the NINCDS to increase its research efforts for Batten's disease. The Committee requests that a report on Batten's disease, including the amount of research supported during fiscal year 1987 and progress being made, be submitted before the NINCDS presents its fiscal year 1988 budget request." (Senate Report No. 99-408, page 80)

The following report has been prepared by the National Institutes of Health of the Department of Health and Human Services in response to this request.

BACKGROUND

Batten disease is one of a relatively rare group of inherited disorders of the nervous system that usually strike in infancy or childhood. The disease affects 2 to 3 in every 100,000 people and is characterized by visual loss, seizures, and progressive mental impairment. Motor disturbances, including spastic weakness, rigidity, and severe tremor, are also common symptoms. Although the course of the disease can vary, in general the earlier seizures begin, the faster the disease progresses.

The cause of Batten disease is unknown, but it may be a result of abnormal accumulations of certain fatty substances in the body's tissues. These substances, called lipopigments, contain greenish-yellow fats that form fluorescent deposits in the body's tissues. The presence of these deposits is used to diagnose the disease. Scientists do not yet know how the stored lipopigments relate to the nerve damage of Batten disease.

Batten disease is a disorder that occurs only when a child inherits a defective gene from each parent. Children who inherit only one defective gene are carriers; that is, they may have no signs or symptoms of the disorder but are able to pass the gene on to their children. No method is currently known for identifying these carriers of the gene.

There are three childhood forms of ceroid lipofuscinosis and two adult forms. The childhood forms have similar symptoms, but these become apparent at different ages and progress at different rates. The infantile form, or Santavouri disease, begins at about eight months and progresses rapidly. Affected children fail to thrive, have abnormally small heads, and typically have shocklike muscle contractions called myoclonic jerks. Patients usually die before age five, although some have survived a few years longer.

The late infantile form, or Jansky-Bielschowsky disease, begins around age three. Typical early signs of this disorder are lost muscle coordination and seizures that do not respond to drugs. This form progresses rapidly and ends in death between ages eight and twelve.

The juvenile form, called Batten disease or Spielmeyer-Sjogren disease, begins with progressive vision loss and seizures between ages five and ten and advances more slowly than the two infantile forms. Death usually comes in the late teens or early twenties, but some patients have survived longer.

There are also two very rare adult forms known as Kuf disease and Parry disease. These varieties lead to dementia but do not cause blindness and are not fatal.

TREATMENT

No treatment is yet known that can halt or reverse the symptoms of Batten disease. Treatment with vitamins C and E and with diets low in vitamin A have reportedly stabilized some patients for a short time. However, these treatments did not change the fatal outcome of the disease.

Support and encouragement are needed to help families cope with the profound disability and dementia in a patient with Batten disease. Physical and play therapy can also keep up the child's spirits, while support groups can help maintain the family's outlook. Seizures can sometimes be controlled with anticonvulsant drugs, and other medical problems are treated as they arise.

RESEARCH PROGRESS

Some researchers have suggested that children with Batten disease are missing an enzyme that helps the body break down substances no longer needed. The lack of this particular enzyme could prevent cells from breaking down fats and their associated proteins in a normal way. Some of these fats and proteins might then accumulate to form the lipopigments involved in Batten disease. Investigators are currently searching for the enzymes that might be scarce, or completely missing, in children with this disease. The goal of this research is to discover if there may be a way to treat affected children with natural or synthetic enzymes, e.g., to replenish the missing substances in the child's body.

Scientists are also studying animals with diseases similar to Batten disease. An NINCDS-supported investigator is examining different kinds of tissue from sheep with a disease similar to Batten disease to determine the early vision changes caused by the loss of retinal cells in the eye. The objective of this study is to develop a method for early diagnosis and detection of carriers of the disease. Other scientists are working with dogs that have diseases similar to Batten disease. These animal models provide scientists with an opportunity to study this disease in its early stages, an important step in devising treatment and control strategies.

In addition, the NINCDS supports a broad program of basic research to advance our understanding of the cellular and molecular changes in neurological disorders. Such studies contribute to the rapidly expanding body of knowledge in the neurosciences and enhance our understanding of how disease processes are initiated and progress to produce neurological dysfunction in disorders like Batten disease.

FUTURE RESEARCH DIRECTIONS

Advances in research on Batten disease have emerged slowly. Because progress in this area has been elusive, the NINCDS receives very few research grant applications dealing with the relevant fundamental research that could provide the basis for therapeutic strategies. A number of new leads, however, should serve to focus attention on the problem of Batten disease. To encourage this effort, the Institute estimates that approximately $250,000 in fiscal year 1987 will be spent to support scientific investigations related to Batten disease.

Research, particularly studies concerned with genetic-metabolic disorders affecting the nervous system, is expected to provide crucial information about the etiology and pathogenesis of Batten disease. The hope is that through such research scientists will be able to discover what causes the buildup of fatty pigments in the cells of the brain and nervous system, and in other parts of the body, of those afflicted with this disorder. This understanding may, in turn, lead to measures for prevention, early detection and treatment.

To encourage research in this area, the NINCDS issued a program announcement in October 1986 encouraging the submission of grant applications for support of research related to the etiology, developmental embryology, pathogenesis, genetics and prevention of ceroid lipofuscinoses, particularly the juvenile type known as Batten or Spielmeyer-Sjogren disease. The aim of this announcement is to stimulate additional research to delineate the clinical and genetic types of ceroid lipofuscinoses, to identify and localize the responsible gene or genes, to determine the biochemical defects that result from the action of these genes, and to develop measures for the prevention, early diagnosis and treatment of these disorders.

The Institute also plans to fund multidisciplinary research centers for the purpose of investigating the epidemiologic, genetic, biochemical and clinical aspects of neurogenetic disorders in infants and children. It is hoped that investigations conducted in these research centers ultimately will lead to better methods of diagnosis, treatment, and prevention of disorders like Batten disease.

CONCLUSION

Batten disease is an inherited disorder of the nervous system and usually strikes in childhood. The cause of Batten disease is unknown, but it may be the result of abnormal accumulations of certain fatty substances in the body's tissues. Scientists do not know what triggers the buildup of these substances, and there is as yet no effective treatment. The childhood forms of the disease are always fatal.

The NINCDS estimates it will spend approximately $250,000 in fiscal year 1987 to support research related to Batten disease in the hope that such support may someday provide the basis for combating this devastating disorder through more effective diagnosis, treatment, and prevention.

Senator HARKIN. Dr. Rider, thank you very much for your testimony. You said there was only one grant of $78,500 last year?

Dr. RIDER. Yes.

Senator HARKIN. And you are requesting at least $1 million for 5 years?

Dr. RIDER. Per year for 5 years. Our foundation has expended probably close to $1 million over the last 20 years. That is why all of this has been accomplished. We feel now it is time for the NIH to come in and put the clincher on this research.

Senator HARKIN. Dr. Rider, thank you very much for your fine testimony. I now call on the distinguished Senator from Pennsylvania to introduce our next witnesses.

Senator SPECTER. Thank you, Mr. Chairman. I am delighted to introduce today our next two witnesses. Mrs. Gerry Fox is a long-standing friend of mine for some 25 years, although you cannot tell it from her youthful appearance. She is the chairperson of the Governmental Relations Committee of the Deafnesss Research Foundation, which is a nonprofit health organization raising funds to attract scientists to the field of deafness.

This foundation last year raised over $2 million and awarded some 78 grants to researchers in some 35 States. Mrs. Fox will be presenting testimony today and will be accompanied by Mr. Larry Brown, who is a member of the board of Deafness Research Foundation. Mr. Brown, as I think many know, is a former member of the Washington Redskins and named NFL's player of the year in 1972.

I think their testimony is especially important, Mr. Chairman, because of the tremendous problem which deafness causes in our society in terms of human pain and suffering, in terms of limitation, not knowing what is happening when you cannot hear, you cannot hear fully, and it is a major economic loss accounting for some $17 billion a year in terms of medical costs. Deafness has an enormous cost in our society generally in terms of loss of productivity. Research is so very, very important.

This subcommittee on which I have served now—I am in my seventh year—has been very concerned about the problems of deafness and medical research generally. I know, Mr. Chairman, that you share these concerns and I think Mrs. Fox has made a great individual contribution and I think it is not irrelevant to note that she has a great concern because of her own problem having sustained a problem with her own hearing in her left ear some 30 years ago when she contracted mumps from people she was teaching. I am very pleased to be present to introduce Mrs. Fox and Mr. Brown, and to join you in hearing their important testimony.

Senator HARKIN. Thank you very much, Senator Specter. Mrs. Fox and Mr. Brown, welcome to the subcommittee. As I said in the beginning, your statement will be made a part of the record and if you please summarize it, it will be most appreciated.

STATEMENT OF GERALDINE FOX, DEAFNESS RESEARCH FOUNDATION ACCOMPANIED BY LARRY BROWN, DEAFNESS RESEARCH FOUNDATION

Mrs. Fox. Thank you, Senator Specter. I am really honored that you introduced me and I appreciate your taking the time from your busy schedule.

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to testify today. I am here to encourage to expand new Federal moneys through NIH for deafness research in the field of deafness and other related hearing disabilities.

While some ear diseases can now be treated with either surgical or medical procedures, the vast majority of persons with hearing losses cannot at present be effectively treated because 80 percent of all hearing losses are caused by nerve deafness for which their is no cure.

Unfortunately, Mr. Chairman, there are still many unanswered questions. To close the gap on this invisible handicap will require a strong sustained effort, one that is targeted on deafness research. Such an effort would enable scientists to move ahead in the more promising areas of investigation.

Mr. Chairman, let me say to you and the members of your subcommittee that you have been true friends and we appreciate deeply the leadership that you have shown when it comes to deafness research. Your support in the past has meant so much to us and it has brought us closer to unraveling some of the deep medical mysteries that surround deafness. Given that 1 out of 10 Americans is afflicted with a hearing loss or some type of ear disease, it is clear that the level of research investment in this area lags far behind the need.

As a matter of fact, for the past 5 years deafness research has received only 10 percent of the funds appropriated to the National Institute of Communicative Disorders and Stroke. Moreover, in the President's budget, according to this NINCDS will be spending more than 8 percent less on deafness in fiscal year 1988 than it did in fiscal year 1987.

To put this in some perspective, next year NINCDS plans to spend $41 million on a problem that cost society $17 billion. Now with——

Senator Specter. $17 billion.

Mrs. Fox. $17 million.

Senator Specter. Billion.

Mrs. Fox. Did I say million? Thank you. That amounts to about $2 per victim, or the cost of a cup of coffee and a donut, and that is for 22 million Americans alone who suffer partial or total hearing losses.

Considering the magnitude of the problem and the fact that there are so many talented and dedicated researchers who study hearing disorders, we believe that administrative mechanism such as a hearing research institute should be put in place for a stronger, more directed program in this area.

PREPARED STATEMENT

In the meantime, our Foundation respectfully urges that no less than $80 million be appropriated to deafness research in fiscal year 1988. Thank you, and I would like to give the platform to Mr. Brown who has a few things to say.

[The statement follows:]

STATEMENT OF GERALDINE FOX

My name is Geraldine Dietz Fox and I am Chairperson of the Government Relations Committee of the Deafness Research Foundation. I appreciate the opportunity to testify today. I am here to encourage you to expand new federal monies through NIH for research in the field of deafness and other related hearing disabilities.

Accompanying me today are Mr. Lawrence Meli, the President of our Foundation, and Mr. Larry Brown, a distinguished member of our Board of Directors and a former member of the Washington Redskins.

Mr. Chairman, the Deafness Research Foundation is a national voluntary health organization that was established nearly thirty years ago. Its mission is to promote research to conquer deafness, an affliction that is more serious and widespread than is generally realized. Last year alone, we raised over two million dollars and awarded grants to 78 researchers in 35 states.

Deafness is often referred to as the invisible handicap. But I can assure you that for the 22 million Americans who are partially or totally deaf, the emotional or physical suffering they must endure is anything but invisible. For many, deafness may mean a life of confusion and withdrawal -- from families, loved ones, and society as a whole. And to the one million children who are afflicted, deafness can mean living a world apart from others throughout the most formative years of their lives. These children will never read beyond a sixth-grade level because their ability to learn language will be so compromised.

Tragically, hearing loss of any nature robs us of our full membership in the human community. But its implications go far beyond the individual. According to the latest estimates, deafness costs society more than $17 billion annually when measured in terms of medical care, the added costs of special education programs, and loss in productivity.

Of course, there is no way to measure the cost of wasted lives caused by isolation, limited education (therefore limited jobs), and the very real and persistent social stigma that still haunts most deaf persons.

Let me say to you and to your colleagues on the Subcommittee that you have been true friends, and we appreciate deeply the leadership you have shown when it comes to deafness research. Your support in the past has brought us closer to unraveling some of the deep medical mysteries that surround deafness. In fact, progress has been rapid in certain areas.

Through research, for example, we have learned that some drugs used to treat cancer or bacterial infections can destroy hearing. This new-found knowledge has led us to avoid certain drugs or control their use by physicians.

We have also seen advances in hearing aid technology, and this has especially helped children and our increasing elderly population, which will double by the year 2006. Computers have yet to be used in the widespread development of hearing aids, yet computers and high technology were used in the development of more profitable items, such as the Sony Walkman.

It is interesting to note that much of what we have learned through hearing research has had broader implications for society as a whole. Many of the technological advances in warning signals in industry, the military, and hospital intensive care units were the result of new knowledge gained through hearing research.

But while some ear diseases can now be treated with either medical or surgical procedures, the vast majority of persons with hearing loss cannot, at present, be effectively treated. This is because 80 percent of all hearing losses are caused by nerve deafness, for which there is no cure. Unfortunately Mr. Chairman, there are still many unanswered questions.

To close that gap will require a strong, sustained effort--one that is targeted on deafness research. Such an effort would enable scientists to move ahead on some of the more promising areas of investigation, including:

* developing a vaccine to combat ear infections in children;

* isolating genetic or hereditary factors which are believed to cause 50 percent of all hearing disorders;

* providing the profoundly deaf not only with hearing "sounds" which keep them environmentally safe (fire alarm, car horn, door closing) but with speech or language through a more sophisticated cochlear implant;

* perfecting drugs to control dizziness and Meniere's disease; and

* learning how we can prevent or treat tinnitus (inescapable ear noises).

Mr. Chairman, given that one out of ten Americans is afflicted with a hearing loss or some type of ear disease, it is clear that the level of research investment in this area lags far behind the need. As a matter of fact, for the past five years, hearing research has been allocated only about ten percent of the funds appropriated to the National Institute of Neurological and Communicative Disorders and Stroke. Moreover, according to the President's budget document, NINCDS estimates that it will be spending more than 8 percent less on hearing research in FY1988, compared to the FY1987 appropriation.

To put this in some perspective, next year NINCDS plans to spend only about $41 million on a problem that costs society $17 billion. That amounts to spending less than $2 per victim or about the same as the cost of a cup of coffee and a doughnut!

Considering the magnitude of the problem and the fact that there are so many talented and dedicated researchers who study hearing disorders, we believe that administrative mechanisms, such as a hearing research institute, should be put in place to provide for a stronger, more directed research program in this area.

In the meantime, our Foundation respectfully urges that no less than $80 million be allocated for deafness research in FY1988.

Although we can never recapture opportunities lost to the past, it is not to late to begin mounting a strong, sustained effort toward finding cures, preventions, and treatments for these serious problems.

Thank you, Mr. Chairman for kind attention and consideration.

Mr. BROWN. Mr. Chairman, members of the subcommittee, I am extremely pleased to have an opportunity to share with you a personal statement about my hearing impairment.

Fortunately for me, this hearing impairment did not impede my growth and development as a person, athlete, or businessman. There are two main reasons for this. First, the late Vince Lombardi encouraged me to reveal my hearing problem publicly, and gave me continued support.

Second, a local hearing aid specialist designed a hearing device for my football helmet. This enabled me to play better football and to be named the National Football League's Player of the Year in 1972.

I was one of the fortunate ones. How many Vince Lombardis are there in the world? He found a way to help me hear better. We are here today to ask you to help 22 million people hear better, and to give them an opportunity to become active members of America's team, and to be recognized for their contributions to our society. What happens to these people without your continuous and increased support? Your role is vitally important to the growth and the development of this enormous segment of our population, and you could be their Vince Lombardi. Thank you.

Senator HARKIN. Thank you very much, Mr. Brown. Senator Specter, do you have any questions?

Senator SPECTER. I would like to thank both of you for coming in today. I would like to thank all the witnesses who are here. Your messages are very important beyond any question. Gerry Fox's experience as a teacher doing public service and contracting mumps and lossing the hearing capacity in her left ear, and your experience, Mr. Brown, as a professional football player.

I expected you to be a lot bigger from recollection of watching you play.

Senator HARKIN. He sure looked big in those days. When you watched him on television he filled the whole screen.

Senator SPECTER. You looked big when you played against the Philadelphia Eagles.

You are great examples. Your experience as a professional football player and your success notwithstanding the impediment is a great example for people with all sorts of disabilities, not only hearing.

Senator Harkin and I on the subcommittee and the whole Senate and Congress have a very tough job in allocating funds. We will weigh very carefully what you said. We heard you.

Senator HARKIN. Thank you. I want you both to know that also I have a longstanding interest in hearing research because I have a brother who is deaf. My brother has been deaf since he was 10 years old. So I have been through all of that all of my life with him and all of his problems in going through the school for the deaf and his employment problems and everything else that has followed him all through his life.

When you talk about the problems of the deaf, I know what you are talking about. I want you to know there are a lot of people, not just myself, Senator Specter also is very supportive of our efforts in addressing the problems of the deaf, that are very much on your side on this. Thank you.

STATEMENT OF LAWRENCE S. HOFFHEIMER, NATIONAL COMMITTEE FOR RESEARCH IN NEUROLOGICAL AND COMMUNICATIVE DISORDERS

ACCOMPANIED BY BOBBY R. ALFORD, M.D., NATIONAL COMMITTEE FOR RESEARCH IN NEUROLOGICAL AND COMMUNICATIVE DISORDERS

Senator HARKIN. Next we will turn to Lawrence S. Hoffheimer, National Committee for Research in Neurological and Communicative Disorders.

Mr. HOFFHEIMER. Thank you, Mr. Chairman.

Senator HARKIN. Welcome to the committee. Please proceed.

Mr. HOFFHEIMER. It is my pleasure to be here today. Thank you for the opportunity to present Dr. Bobby Alford who is chairman of the National Committee for Research and Neurological and Communicative Disorders, which is a coalition of more than 60 organizations who are interested in communicative and neurological research.

Dr. Alford is vice president and dean of academic and clinic affairs at Baylor College of Medicine. It is my pleasure to introduce him to deliver the testimony to this committee today.

Dr. ALFORD. Mr. Chairman, thank you for the privilege of appearing before you today. These 62 voluntary and professional health organizations that are in a coalition are dedicated solely to increasing support for research in neurological and communicative disorders.

My message today is very simple, Mr. Chairman. There are four points that I wish to make. The first point is that in the NIH, NINCDS is this country's leading research organization which is striving to prevent, correct, cure, or ameliorate some 600 neurological and communicative disorders. These disorders cost society $114 million annually for treatment. Yet, at the NINCDS we spend $399 million, or only 0.0035 percent of that cost to society and federally supported research on the causes, prevention and cure of these disorders.

Point two is the scientific research momentum created by NINCDS is accelerating. There are many new opportunities for greater understanding in this field. Most recently you have probably seen articles about the genetic link to Alzheimer's disease and Down's Syndrome, and the exciting work with the transplant to help Parkinson's patients.

Because I am an otorhinolaryngologist, head and neck surgeon, I am interested in hearing and we have been excited about the work cochlear implants. This has led to improvements in designs of hearing aids. We are also excited about the results of some clinical trials in secretoriotitis median. It has led us to the most effective treatment of that problem which is so rampant in small children.

Point three is that over 60 percent of grants go unfunded. These are approved grants, approved through the NINCDS mechanism and they go unfunded. This sends a message to some of our best researchers, do not bother.

Point four, a prestigious committee of NCR composed of scientists and representatives of the voluntary organizations has reviewed the President's budget and found it lacking in maintaining the current level of scientific momentum in this area. Consequently, NCR is recommending for your consideration the fiscal year 1988 budget be raised to $648 million. In 1983, the Senate Committee on Appropriations commissioned an evaluation of research opportunities in this field. I was a member of that task force. The message then is true today as it was then. At that time for fiscal year 1985 they requested $667 million, less then we are requesting today.

PREPARED STATEMENT

We ask your special consideration, Mr. Chairman.

[The statement follows:]

STATEMENT OF BOBBY R. ALFORD

Mr. Chairman, I am Bobby R. Alford, M.D., and I am pleased to appear before you today in my capacity as Chairman of the National Committee for Research in Neurological and Communicative Disorders or otherwise known as NCR. I am the Distinguished Service Professor and Olga Keith Wiess Chairman of the Department of Otorhinolaryngology and Communicative Sciences and Vice President and Dean for Academic and Clinical Affairs at Baylor College of Medicine in Houston, Texas.

Mr. Chairman, NCR is well known to this Committee. I am pleased to report that it continues to be a dynamic organization of 62 voluntary and professional health organizations dedicated solely to increasing support for research in neurological and communicative disorders. Our list of member organizations reads like a register of the most debilitating chronic conditions threatening mankind and affecting the lives of all ages, the very young and the very old. Other members represent professionals - physicians, scientists and researchers - who are dedicated to solving the great mysteries of how the human body functions, especially as it pertains to the brain, the other parts of the nervous system, and the organs for hearing, balance, swallowing, speech, smell or taste.

Mr. Chairman, the message of NCR today is very simple, and there are four points I wish to make:

1. The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) is this country's leading research organization which is striving to understand, prevent, correct, cure or ameliorate some 600 neurological and communicative disorders. According to reliable sources, these

disorders cost society approximately $114 billion annually for treatment. Yet, at the NINCDS we spend $399.4 million or only .0035% of that cost to society in federally supported research on the causes, prevention and cure of these disorders. (See Figure 1)

2. The scientific research momentum created by the NINCDS is accelerating. New opportunities for greater understanding of the neurological and communicative processes are at our doorstep. This is demonstrated by the steady rise in the number of grant applications received by the NINCDS and the high scores these applications receive in the review process. Indicative of these opportunities are the recent reports in the March 13 issue of Science, and the New York Times (attached) about new discoveries in the area of proving a genetic cause for Alzheimer's and a connection between Alzheimer's disease and Down's Syndrome. Also, the recent encouraging work pertaining to the transplant of neuroendocrine tissue in the brain in Parkinson's disease patients offers exciting opportunities to ameliorate this problem for these miserable individuals.

Mr. Chairman, as you might expect, I am very interested in the work of the Communicative Disorders Program at NINCDS. This program has had several recent exciting advances, and I would briefly like to mention a few of them. Much public attention has been directed to cochlear implants for persons who are deaf or have a severe hearing loss. The development of this procedure has sparked an increase in the cooperative research of hearing, speech and language scientists exploring speech processing in the ear and the central nervous system, including improvements in the design and application of conventional hearing aids. We have recently learned that the cochlea is not a passive transducer but actually emits sound itself, following sound stimulation. This fact may help us better understand how noise damages hearing. We have also only recently learned that the inner ear's hair cells contract, that is, they act like muscles, contracting and expanding. This may lead to a better understanding of the fine tuning capabilities of the inner ear and how it can be augmented. Observations from deaf persons who use sign language after they have experienced a stroke has shown that the brain's left hemisphere subserves language function whether the stimulus is visual or auditory. Great progress in recent years through clinical trails has established the most appropriate and efficacious treatment for the commonly occurring persistent middle ear fluid problem in children. Next, we hope to find the cause and prevention for this problem. Finally, the Communicative Disorders Program is studying a promising application of personal computers for self-help as a cost effective method of treatment for persons who stutter.

3. Over 60% of the grants approved for funding by the NINCDS peer review process go unfunded, as indicated in Figure 2. This not only is a shocking failure to maximize society's opportunities to ameliorate neurological and communicative disorders, it is tantamount to having the country say to some of its best researchers "Don't bother!" Especially for our young researchers, this is a highly negative and ultimately self-defeating message for this country to be sending.

4. A prestigious committee of NCR composed of scientists and representatives of voluntary organizations has reviewed the

President's budget request and has found it totally lacking in even maintaining the current level of scientific momentum in this area. Instead, NCR is recommending that NINCDS funding for FY88 be raised to $648 million. While this may be considered a substantial increase, it must be kept in mind that it would only allow NINCDS to fund 45-50% of approved grants. While this is a step forward, an increase in funding from less than 40% up to 50% still means that half of all grants with proven scientific merit will go unfunded.

Neurological and communicative disorders affect approximately 42 million Americans. They include cerebral palsy, epilepsy, head injuries, multiple sclerosis, muscular dystrophy, Parkinson's disease, stroke, spina bifida, deafness, balance disorders, hearing impairments and speech impairments and disorders of swallowing, breathing, smell and taste. The $114.1 billion cost annually for treatment of these disorders in large part is paid by the federal government through Medicare, Medicaid, the Education of the Handicapped Act and the Rehabilitation Act.

In 1983, the Senate Committee on Appropriations commissioned an evaluation of research opportunities in the neurological and communicative sciences. I was privileged to be a member of that task force. The message of that evaluation is as true today as it was in 1983:

> We are on the verge of an important new revolution in medicine. We have within our grasp the information, the tools, and the human resources to take the final steps toward understanding how the human brain works and how to correct many of the disorders that affect it, and thus, to allow every human mind to realize its full

> intellectual and emotional potential...
> There is every indication that research and research training in the neurological and communicative sciences, if adequately supported by the Congress of the United States, will sustain and even accelerate the already exponential increase in our understanding and ability to alleviate - and indeed cure - neurological disease.

Unfortunately, we have barely sustained and have not accelerated opportunities in this area. The authors of that report in 1983 recommended a FY85 funding level of $667.86 million - less than what we are asking for in 1988! We seek your special consideration.

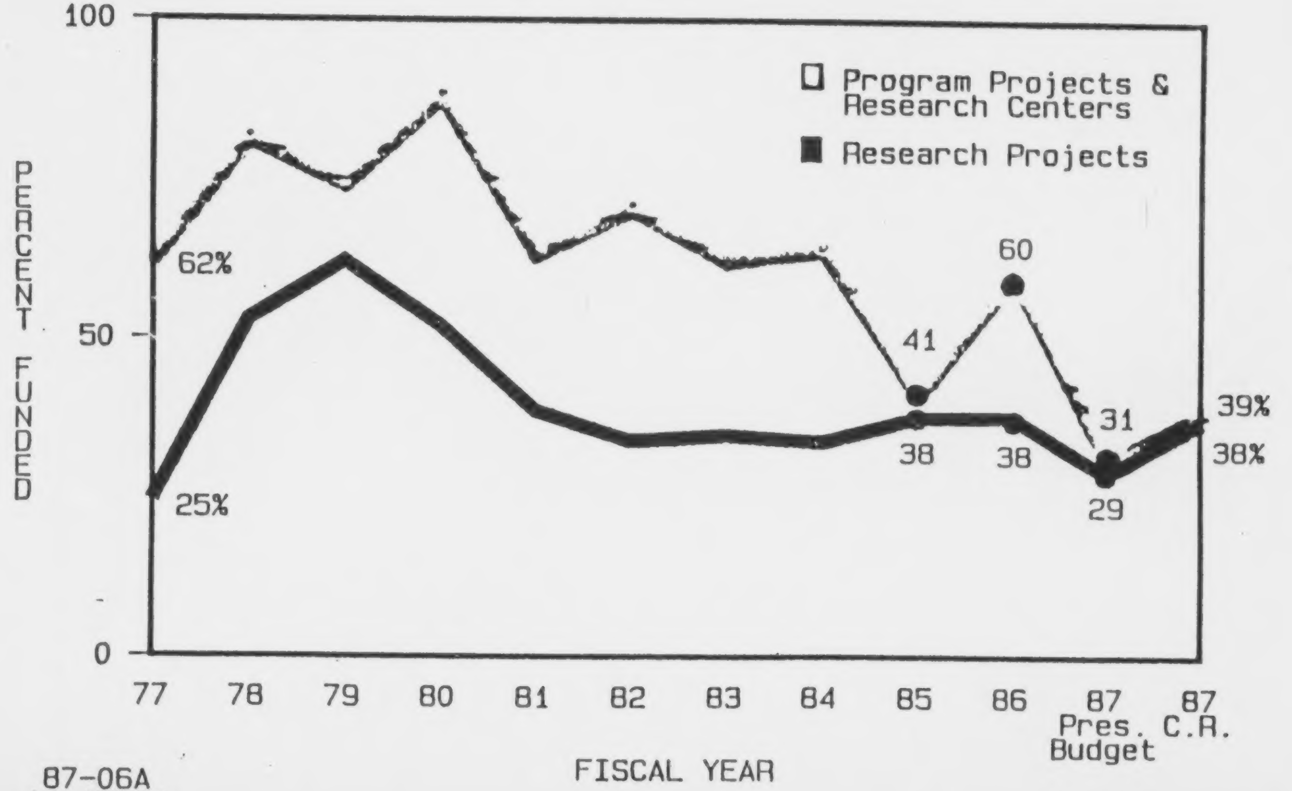
BIOGRAPHY OF BOBBY R. ALFORD

Bobby R. Alford, M.D. is the Distinguished Service Professor and the Olga Keith Wiess Chairman of the Department of Otorhinolaryngology and Communicative Sciences and the Vice President and Dean for Academic and Clinical Affairs, Baylor College of Medicine.

Dr. Alford has devoted his professional academic life to activities concerned with research, education, and patient care in the field of otorhinolaryngology and communicative sciences. He serves as Director of the Institute of Otorhinolaryngology and Communicative Disorders in the Neurosensory Center of Houston.

In government service he has been Chairman of the NINCDS Communicative Disorders Review Committee, a member of the NINCDS National Advisory Council, and consultant to the Surgeons General of the Army and the Navy. Currently, he serves on the NASA Life Sciences Advisory Committee, and, in addition, he is Chairman of the Peer Review Panel of the Space Biomedical Research Institute of NASA.

NINCDS COMPETING RESEARCH GRANT APPLICATIONS
1977 - 1987
PERCENT FUNDED OF APPROVED (#Funded/#Approved)



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Prevalence and Economic Impact of the Major Neurological and Communicative Disorders

Disorder	Estimated Cases[1]	Cost of Illness[2]	Research Dollars Spent by NINCDS FY 87 Estimate
Trauma: Head Injury and Spinal Cord	1,000,000	$4.68 billion[3]	$37.8 million
Stroke[4]	1,800,000	11.3 billion[3]	26.5 million
Epilepsy	2,000,000	3.0 billion	25.8 million
Hearing and Speech:			
Deafness	2,000,000	2.0 billion	{43.7 million
Partial deafness	14-15,000,000	14-15 billion	
Speech, language	10,000,000	10.0 billion	16.5 million
Infectious disorders of the nervous system	25,000[5]	25 million	11.9 million
Parkinson's disease, Huntington's disease, and other movement disorders	500,000	2.5 billion	12.1 million
Alzheimer's disease and related dementias	3,000,000	50.0 billion[6]	13.1 million
Demyelinating and atrophic disorders:			
Multiple sclerosis	131,000[3]	1.12 billion[3]	{27.5 million
Amyotrophic lateral sclerosis	14,000	300 million	
Disorders of early life (cerebral palsy, perinatal injuries, retardation, etc.)	750,000	3.75 billion	45.8 million
Neuromuscular disorders	1,000,000	5.0 billion	18.5 million
Peripheral neuropathy (diabetic, other)	1,000,000	1.0 billion	4.5 million
Other neurological disorders	8,000,000	8.0 billion	50.5 million
Fundamental neurosciences research[7]	--	--	65.2 million
TOTAL	42,620,000	$114.1 billion	$399.4 million

Note: due to rounding, figures may differ slightly from those in other tables.

[1] Estimates obtained from voluntary agencies and experts in the relevant fields.

[2] Includes direct cost of health care as well as indirect costs of income lost due to illness. Some patients with neurological disorders require care costing more than $10,000 per year. Expenses can include drugs, physical therapy, prosthetic devices, physician's fees, hospitalization, and nursing care, as well as care provided at home. Considerably lower direct costs are often incurred by patients with epilepsy (some of whom are now being successfully treated with drugs), head injury, reading disabilities, or sensory impairments; however, patients with these disorders often incur expenses for special education, speech therapy, hearing aids, and specialized care.

[3] Estimated from NINCDS survey.

[4] Excludes transient ischemic attack (TIA).

[5] Incidence (number of new cases reported each year).

[6] Excludes income lost due to illness.

[7] Research not specifically on a particular disorder, but which explores the mechanisms of the nervous system and the basic pathophysiology of its diseases and disorders.

Senator HARKIN. In the area of Parkinson's disease, some great strides have been made in the past few months. I just wanted to ask you what you see in the coming few months in the treatment of Parkinson's disease. You mentioned the transplant. That looked like it had some possibilities.

Did you see the "Nova Program" about a year ago that was on Nova. It was a television program?

Dr. ALFORD. I am sorry, I did not.

Senator HARKIN. About a year ago "Nova" had an hour long program on Parkinson's disease. I saw it. In fact, I have a copy of it because I was so interested in the program itself and finding out what the causes of Parkinson's is, and about its linkage to certain chemicals, and tracking those down and finding out how they affect the brain.

I wish you would take a look at that if you can get a copy of it. If you need it, I will get it for you.

Dr. ALFORD. It is exciting work. It is a derivative of the research and the work that has been supported in the past. The application of the understanding of the molecular neurochemistry in the treatment of Parkinson's disease certainly is extremely promising today.

Senator HARKIN. Thank you. Next we will call Dr. Jerome Goldstein and Dr. Kenneth Miller.

STATEMENT OF JEROME C. GOLDSTEIN, M.D., F.A.C.S., EXECUTIVE VICE PRESIDENT, AMERICAN ACADEMY OF OTOLARYNGOLOGY—HEAD AND NECK SURGERY

Dr. GOLDSTEIN. Thank you, Senator Harkin.

Senator HARKIN. Excuse me, but are you Dr. Goldstein or Dr. Miller?

Dr. GOLDSTEIN. I am Dr. Goldstein. Dr. Miller is not here.

I am Dr. Jerome Goldstein, executive vice president of the American Academy of Otolaryngology—Head and Neck Surgery.

I am an otolaryngologist and for 10 years was head of the training program in that specialty at Albany Medical College.

I am speaking on behalf of this academy, which is the largest organization of these specialists in the world, with more than 8,000 members, including 96 percent of all board certified otolaryngologists.

These physicians and surgeons care for diseases and disorders which affect the ears, nose, throat, and head and neck. We care for patients of all ages, from the premature infant to the most elderly.

Last year, otolaryngologists conducted more than 45 million office visits and performed more than 7 million operative procedures.

Let me state at the outset that we enthusiastically support the call of the ad hoc group on medical research funding, of which the academy is a member, for an overall appropriation of $7.6 million for the NIH. We similarly are a member of and support the request of the National Committee for Research for $648 million for the National Institute of Neurologic, Communicative Disorders, and Stroke.

I would like to emphasize to this subcommittee that in this era, when we are at the doorstep of greater understanding of neurological and communicative processes, at present approximately 40 percent of grant applications approved for funding, after a painstaking review process, can be funded. This is a turnoff to some of our brightest young researchers. The amount I am requesting for NINCDS would still only allow funding for approximately 50 percent of approved grants, meaning that one-half of all grant requests with proven scientific merit would still go unfunded.

We also enthusiastically request that the National Institute on Aging receive $240 million for fiscal year 1988.

The NIA recently issued a report concerning three otolaryngologic disorders which commonly occur in the elderly. These are disorders of hearing, speech, and swallowing. That report stated that in the aged, there was some research being carried out in the area of hearing loss, very little research in the speech area, and almost none concerning the problems of swallowing. It emphasized that nearly one-third of those from 65 to 75 years of age, and 50 percent of those 75 years of age or older, have a significant hearing loss, and indicated that there is no such information concerning the epidemiology of speech and swallowing disorders.

Epidemiological information is essential to direct further basic and applied research in these areas.

Another aspect of geriatric otolaryngology is concerned with the decreased sense of smell. As we become older, the ability to detect odors is diminished. Recent studies show that many of the elderly cannot detect the odorant which is used in household gas to serve as a warning that gas has escaped.

The lessening of the sense of smell can impair nutrition and consequently the total health of the elderly.

Unfortunately, because of a lack of research, the reasons for and treatment of these olfactory deficits are not known. This must be pursued.

Thank you, Mr. Chairman, for the opportunity to present this testimony. I would be pleased to answer any questions.

PREPARED STATEMENT

Senator HARKIN. Dr. Goldstein, I have no questions. But thank you very much for taking the time to be here and for your fine testimony.

Dr. GOLDSTSEIN. Thank you.

[The statement follows:]

STATEMENT OF DR. JEROME C. GOLDSTEIN

Senator Chiles, members of the subcommittee, I am Dr. Jerome C. Goldstein, executive vice president of the American Academy of Otolaryngology—Head and Neck Surgery. I am an otolaryngologist and for 10 years was head of the training program in that specialty at Albany Medical College in Albany, NY. I am speaking on behalf of the American Academy of Otolaryngology—Head and Neck Surgery which is the largest organization of the specialists in the world with more than 8,000 members, including 96 percent of all board certified otolaryngologists. These physicians and surgeons care for diseases and disorders which affect the ears, nose, throat, and head and neck in general. We care for patients of all ages, from the premature infant to the most elderly. Last year, otolaryngologists—head and neck surgeons conducted more than 45 million office visits and performed more than 7 million operative procedures.

Let me state at the outset, that we enthusiastically support the call of the ad hoc group on medical research funding, of which the academy is a member, for an overall appropriation of $7.6 milion for the NIH. We similarly are a member of, and support the request of the National Committee for Research for $648 million for the National Institute of Neurologic, Communicative Disorders, and Stroke. I would like to point out that in this era of accelerating and enlightened research, when we are at the doorstep of greater understanding of neurological and communicative processes, at present approximately 40 percent of grant applications approved for funding after a painstaking review process can be funded. This is not only a shocking failure to maximize society's research opportunities, but also causes some of our brightest young researchers to turn away from a research career. The amount I am requesting for NINCDS would still only allow funding for approximately 50 percent of approved grants, meaning that one-half of all grant requests with proven scientific merit would still go unfunded.

We also enthusiastically request that the National Institute on Aging receive $240 million for fiscal year 1988. The NIA recently issued a report in response to a request last year from the House Subcommittee on Labor, HHS and Education Appropriations concerning three otolaryngologic disorders which commonly occur in the elderly. These are disorders of hearing, speech, and swallowing. That report stated that in the aged there was some research being carried out in the area of hearing loss, very little research in the speech area and almost none concerning the problems of swallowing. The report emphasized that high prevalence of hearing disorders in the elderly; nearly one-third of those from 65 to 75 years of age and 50 percent of those 75 years of age or older have a significant hearing loss. The report indicated that there is no such information concerning the epidemiology of speech and swallowing disorders, and outlines several critical needs inthese three areas of geriatric otolaryngology. Epidemiological information concerning the types of hearing disorders which are found in the elderly is essential to direct further basic and applied research in these areas. The report stressed the need to recruit and train qualified investigators in the areas of geriatric otolaryngology for there is a profound lack of such expertise at present.

Another aspect of geriatric otolaryngology is concerned with the decreased sense of smell. As we become older, the ability to detect odors is diminished. Recent studies show that many of the elderly cannot detect the odorant which is used in household gas to serve as a warning that gas has escaped. There should be an increase made in the amount of odorant used so that the elderly can detect the gas. The lessening of the sense of smell can impair nutrition and consequently the total health of the elderly. Unfortunately, because of a lack of research, the reasons for these olfactory deficits are not known. This must be pursued. Work shows this may be an early sign of Alzheimer's disease.

Thank you Mr. Chairman for the opportunity to present this testimony. I would be pleased to answer any questions.

STATEMENT OF TRUDY JACOBSON, ON BEHALF OF THE EPILEPSY FOUNDATION OF AMERICA, LANDOVER, MD

Senator HARKIN. Next is the Epilepsy Foundation of America.

Ms. JACOBSON. Good day, Mr. Chairman.

On behalf of the Epilepsy Foundation of America, myself, Trudy Jacobson, and my family, I appreciate this opportunity to appear before this subcommittee this afternoon.

Last year, I would never have expected I would be someone with the needs and concerns about the adequacy of epilepsy research funding.

This afternoon, I personally thank you, Mr. Harkin, Mr. Chiles, and Senator Weicker, for your ongoing concern.

I am particularly pleased to be testifying before you, Mr. Harkin, because of your leadership of the Handicapped Subcommittee.

My written testimony includes much of the current background and statistics on epilepsy research. You will hear from some of the most reknown research scientists, who care deeply and work diligently for the imminent breakthrough we all hope is close.

I don't work with epilepsy. I live with it.

My son, Jeremy, who will be 4 in July, was diagnosed a year ago to have epilepsy, and is now one of many to benefit from a variety of programs funded by this subcommittee.

Jeremy's motor skills seemed somewhat delayed compared to his older brother. Although the pediatrician felt it was late development, everything looked normal. When I took him to an ophthalmologist and asked why Jeremy walked into walls, he said he had no visual or perceptual problems.

When I asked the orthopedist why did my son seem to trip over the lines on a football field, he said, as we said, Jeremy was our lovable clutz.

Unfortunately, our concerns grew, and last June, Jeremy had his first EEG. He had several small, almost undetectable seizures while on the table, which gave all the proof necessary that my very normal child had epilepsy, had seizure disorders.

Jeremy has had as many as 150 seizures a day. He has four different types of seizures—absence, complex partial, atonic, and a form of myoclonic. Epilepsy, as shown by Jeremy's experience, is a very complex condition, comprising more than 20 distinct seizure types.

While substantial progress has been made in controlling some of these forms of epilepsy, many remain resistant to current therapy. Jeremy's has not yet been controlled.

Jeremy is amongst the almost 50 percent of all people with epilepsy who continue to have occasional seizures. His are more frequent than most.

Jeremy has had four different drugs prescribed for him. The first two had significant side effects without offering the control we desperately sought. Jeremy has suffered such extreme drowsiness he would sleep through nursery school and his little peers would refer to him as a mouse. He would lose his appetite, have nausea, memory loss, and he has even forgotten his name.

Last November, my husband and I realized that we had to become advocates and made two decisions. First, we changed doctors.

We are now with a doctor affiliated with the Epilepsy Center at Johns Hopkins Hospital in Baltimore. We are lucky. We only live an hour from one of the very few centers in the country.

We also sought the advice of a child psychologist to prove our son was cognitively normal, but, due to the epilepsy, had multiple handicaps and required special education. We hope the Early Intervention Program will continue to be fully funded.

The Epilepsy Foundation is appreciative of your support for this program, Senator Harkin.

Medically, Dr. Holden prescribed another drug, depacote, or sodium velproate. This wonder drug is the last drug approved for seizure control in this country, and it was approved over 8 years ago.

Jeremy became seizure free for 8½ weeks, the longest he has been free from them, at the beginning of 1987. By the beginning of March, however, it started up again, only this time, we had the added element of muscle weakness that prevents him from walking and sometimes even sitting.

Just last week, we started a new drug to try to help the depacote work harder. The pharmacist required us to sign a release acknowledging its major side effect and the fact that it was, in fact, contraindicative with the depacote.

But on a short-term basis, we had to risk it to try to break the seizure cycle. Unfortunately, at the end of this month, Jeremy will be admitted to Johns Hopkins Hospital for observation and possibly ketogenic diet.

We have no alternative medicines. Howard and I remain very concerned about Jeremy and all of the others like him. We have discovered that the medical community, as well as the social service providers, know so little about epilepsy.

PREPARED STATEMENT

This is why I beg you to support clinical research into the causes and treatment of epilepsy.

Thank you.

[The statement follows:]

STATEMENT OF TRUDY JACOBSON

Good afternoon. My name is Trudy Jacobson. On behalf of the Epilepsy Foundation of America, I appreciate this opportunity to appear before the Subcommittee and to thank the Subcommittee for your ongoing concern regarding the adequacy of epilepsy research funding.

I am here today because one of my children, Jeremy, has epilepsy and has benefited from programs funded, in part, by this Subcommittee. There are four critical points about epilepsy which I would like to call to your attention.

First, epilepsy remains a highly misunderstood and complicated neurological condition. The child or adult with epilepsy often experiences unjustified rejection by a society which fears what it does not understand.

Second, effective diagnosis and treatment eludes many people with epilepsy. While many of the 2 and 1/2 million Americans who have epilepsy are able to lead lives virtually uneffected by this disorder, there remain some 750,000 people with only partial relief from their seizures, and 500,000 individuals with virtually no relief. There is an ongoing need for comprehensive epilepsy centers where clinical and basic researchers work together to assure adults and children like my son, Jeremy, receive state-of-the-art services.

Third, new and less toxic antiepileptic drugs must be developed to assist individuals like Jeremy achieve seizure control.

Finally, innovative programs and supportive services must continue to be developed and adequately funded to assist individuals with serious health conditions and families remain together. EFA urges the Subcommittee, for instance, to fund the Early Intervention Program at its fully authorized level of $75 million and the respite care program of the Children's Justice and Assistance Act (P.L. 99-401) at $10 million during fiscal year 1988.

Howard and I remain very concerned about Jeremy. We have discovered that the medical community as well as other social service providers know so little about epilepsy. That is why I am very pleased to be here today to ask this Subcommittee to remain vigilant and supportive of research funds for epilepsy - especially clinical research funding.

The Administration's budget request of $458.2 million for NINCDS falls 26 percent short of the professional judgment estimate of $615.7 million. The President's request would not only have a deleterious effect upon biomedical research, but more importantly, upon the quality of life experienced by millions of Americans, including possibly Jeremy, well into the future.

Clinical Research

Many of the most important and successful advances in epilepsy research, diagnosis and treatment came about because of the six Comprehensive Epilepsy Programs which were funded through the use of the contract mechanism during the seventies. Clinical research in epilepsy and many other disorders remains severely underfunded. Dr. Goldstein has testified that:

> "In order to make a meaningful breakthrough in the amount of support in a field like epilepsy, which is heavily based on clinical science as differentiated from basic science at the cell biologic level, it means that we must have a team of clinical investigators working with epileptic patients... It is that area of clinical research, dealing with the epileptic animal model or the epileptic human, which in the competition for available funds on a scientific merit basis does not receive the highest grades. This is true because these are the most difficult experiments to do, as opposed to a test tube experiment".

Congress and NIH must find a new mechanism to evaluate research grants so that clinical proposals do not compete directly against basic grant applications.

Research and Development Contracts

The contract mechanism is often used by the various Institutes to support high priority clinical research. This mechanism, unfortunately, is not widely used by NINCDS today. The use of contract funding by NINCDS has steadily declined in recent years. The fiscal year 1988 request of $12.4 million is 18 percent less than the $15.2 million appropriated in fiscal year 1984. As a percent of the total NINCDS budget, contract funds have declined from 4.5 percent in 1984 to 2.7 percent in the 1988 budget request. The overall NIH average, in comparison, is projected to be 8.1 percent during the current fiscal year.

Antiepileptic Drug Development Program

Contract funds are used by the Epilepsy Branch of NINCDS to support the critically important Antiepileptic Drug Development (ADD) program. Over the past decade, the Epilepsy Branch has evaluated and supported clinical research which ultimately led to FDA approval of four new drugs.

Although more than a dozen drugs are available to treat epilepsy, most produce side effects which can impair an individual's day-to-day functioning. In order to improve the lives of these individuals who pay a high price for seizure control, new and approved antiepileptic drugs must be discovered.

The Foundation appreciates the ongoing support which this Subcommittee has provided the Antiepileptic Drug Development program. This program is a critical component of the search for new and less toxic medications.

Comprehensive/Specialized Research Centers

The importance and contributions of multidisciplinary research centers in neurological research areas has long been documented. The Epilepsy Foundation recognizes the need to balance support between basic neurological research and more targeted basic and clinical research. We do not, however, believe such a balance exists today in epilepsy.

The Administration's $29.6 million request for research centers represents a

3.6 percent reduction from the fiscal year 1987 appropriation although NINCDS plans to continue supporting 38 centers.

38 centers were also supported in fiscal 1984. Funding for centers rose 13.2 percent between fiscal 1984 and fiscal 1987. In contrast, funding for research grants rose 64 percent during this same period of time while the number of research grants increased by 19 percent.

EFA continues to believe that there remains a strong need today for an expanded multidisciplinary approach to epilepsy research. High quality, state of the art clinical research is needed. Effective methods of technology transfer between the laboratory and the practicing physician are needed. And there is an urgent requirement to train the clinician scientists of tomorrow if the momentum of epilepsy research is to be sustained.

The Epilepsy Foundation urges the Subcommittee to provide at least $36 million to enable NINCDS to fully support at least 45 research centers.

Epilepsy Research Trends

The Foundation has used this occasion in recent years to express our growing concern with the declining share of the research budget of the National Institute for Neurological and Communicative Disorders and Stroke (NINCDS) which is allocated to epilepsy research.

Total NINCDS funding increased by 134 percent between 1978 and 1986 compared to a 76 percent increase for epilepsy research. 9.1 percent of the total NINCDS research budget was devoted to epilepsy in 1978. By fiscal 1984, NINCDS support of epilepsy research dropped to 6.0 percent. The Foundation is pleased to note that the share of the Institute's total budget for epilepsy research increased to 6.9 percent during fiscal 1986 to $28.5 million. This was the second straight year of improvement relative to the overall NINCDS budget. The Foundation appreciates the ongoing support for improved funding of epilepsy demonstrated by this Subcommittee in its questions to the Institute and report language.

There can be no question that the epilepsy research field is ripe for further development. New antiepileptic drugs are awaiting the clinical testing phase. Efforts are being made to understand the nature and role of the neurotransmitter gamma butyric acid (GABA) in seizure disorders. The relationship of the GABA receptor to antiepileptic drug mechanism of action is being investigated. Side effects of existing drugs are being recognized. The neuroimaging techniques of computerized tomography (CT scans) and magnetic resonance imaging (MRI scans) is being clinically employed to better understand the structural lesions associated with certain seizure disorders. An intramural project is being planned using Positron Emission Tomography (PET) to image the regional metabolic brain activity during seizures. There is exciting new work being done in genetics that has the potential for application to epilepsy, especially at the molecular level. A preliminary localization of the chromosomal site of Juvenile Myoclonic Epilepsy (JME) is being accomplished with linkage analysis using 31 phenotypic blood markers. New applications of surgical techniques offer the possibility of therapeutic advances.

Yet EFA has already noted that NINCDS funding of clinical research, comprehensive centers and research and development contracts have steadily declined.

Conclusion

Epilepsy is a prime example of a medical condition in which the individual and family members incur repeated direct and indirect costs. Many of these costs are easily identified -- medical costs including physician care, medication, hospitalization, the treatment needs of the severely disabled for continuous or residential care, as well as costs for special education, research, vocational rehabilitation, increased insurance rates, and income losses resulting from unemployment and underemployment.

While some persons with epilepsy and their families are able to shoulder this burden themselves, society absorbs much of the cost in order to sustain and support individuals who have not been able to attain economic independence due to the seriousness of their condition or because of societal attitudes toward them. With appropriate antiepileptic drugs and opportunities, these same individuals can achieve independence.

NINCDS accomplishments have enabled countless individuals with neurological and communicative disorders to lead productive, independent lives. The Epilepsy Foundation of America, joins with the Consortium for Citizens with Developmental Disabilities, in recommending a fiscal 1988 appropriation of at least $588.2 million. This amount would enable NINCDS to continue its modest growth towards meeting the documented research needs and opportunities in the neurological sciences. A copy of the CCDD's recommendations for a several programs providing essential services to people with epilepsy and other disabilities is attached to my testimony.

Again, Mr. Chairman, thank you for permitting me to testify before you this morning.

Senator HARKIN. Trudy, thank you very much for a fine statement.

I have worked with a number of my constituents over a number of years who have had problems with epilepsy in their families. I remember a problem about 8 years ago, when a drug was developed in Europe and we could not get it approved here.

Ms. JACOBSON. That's correct.

Senator HARKIN. They had to go to Canada to get the drug. We finally did get it approved here, and I guess it has worked quite well.

Ms. JACOBSON. It does work for many.

Senator HARKIN. Yes.

Is your son taking that?

Ms. JACOBSON. Yes; he does take it. He also, at present, has been on another drug, called clonopin, which, as I mentioned, we hope would help the depacote work harder. But, due to the fact that he has a very complex condition, we have not as yet found the combination that is effective, and also the fact that, thank God, he is a growing child, it makes it a little more difficult.

Senator HARKIN. Again, Trudy, thank you very much for your fine testimony. I can assure you that this is a matter of the highest importance for us here on this committee.

Ms. JACOBSON. Thank you.

STATEMENT OF MERRILL M. MITLER, PH.D., CHAIRMAN, GOVERNMENTAL AFFAIRS COMMITTEE OF THE ASSOCIATION OF PROFESSIONAL SLEEP SOCIETIES

Senator HARKIN. Next is Dr. Merrill Mitler, Association of Sleep Disorders Centers.

Dr. Mitler, welcome to the subcommittee.

Please proceed.

Dr. MITLER. Thank you, Mr. Chairman.

Mr. Chairman, I am pleased to appear before this subcommittee once again, this time to report excellent progress in Federal recognition of sleep and sleep pathologies.

If anyone still questions the wisdom of expending Federal resources on so trivial a matter as sleep, I hope to convince you that such expenditures are wise and should be expanded.

Sleep is not a trivial matter.

We know that sleep is necessary for life. Yet, someone sleeping at the wrong time can put the entire planet in danger.

In 20 years, we have learned much about the fundamental and profound physiologic changes our bodies face each time we fall asleep.

If you ask people to stay awake for 24 hours, you find that they have the greatest difficulty at two time points. In this top panel [indicating], you see that the first time point is early in the morning, between 4 and 6 a.m., and the second in the afternoon.

This is a biologically determined pattern. This two-peak pattern is so important because it not only affects sleep tendency, but also human performance.

The errors that we see on the roads in traffic accidents, the errors that began the horrible nuclear powerplant accidents in recent history, and errors that cause tragedy in the airways all show this same two-peak pattern associated with sleep tendency.

In the bottom panel, you see that sleep also affects our ability to deal with disease [indicating]. If we plot human mortality, our ability to survive disease, we find that there are two time points when we have the greatest difficulty—again, in the early morning hours and, again, in the late afternoon hours.

I am pleased to announce that the Association of Professional Sleep Societies acknowledges the NHLBI's recent initiative in a program for cardiopulmonary disorders during sleep, to help answer how sleep can affect our ability to deal with disease.

Mr. Chairman, largely because of your subcommittee's interest and support, there exists now a transinstitute coordinating panel, functioning well within the NIH. This panel will coordinate sleep research throughout the institutes. Provided there is sufficient resources, our colleagues now believe they can answer the fundamental questions of our field: what does sleep actually do for us? Can we improve performance in the base of prolonged sleep loss? Can we protect people from life-threatening breathing and heart problems during sleep?

PREPARED STATEMENT

Mr. Chairman, we support the $7.4 billion figure for NIH in fiscal 1988. This is the figure that is commensurate with that recommended by the ad hoc group for medical research funding of which we are a member.

Thank you for your attention.

[The statement follows:]

STATEMENT OF MERRILL M. MITLER

Mr. Chairman and Members of the Subcommittee, the relationship between sleep and health, and our general well-being is now receiving more positive attention than ever before. The focus upon this important subject is multifaceted and covers a wide range of application.

For example, I am just returned from Lyon, France where the North Atlantic Treaty Organization (NATO) held a two-day conference on sleep and its applications for the military. Health professionals, military experts, government agency representatives, and others met to discuss the many military readiness issues that are sleep and sleep disorder related. Among the items investigated were the basic science of sleep, the effects of noise on quality of sleep, sleep in different altitudes, jet lag, disruption and lack of sleep, and others. All of these factors have a significant impact upon performance of a military unit and the individuals comprising that effort. It is no secret that fatigue, biological clock disruption, drugs, lack of exercise and other factors play an important role in one's ability to perform and function at top capacity. It goes without saying that this has serious implications for those maintaining our military readiness. The secret that begs for address is, how do we deal with these factors; how can we improve our ability to function while impaired, or better yet; how do we scientifically and medically address these sleep factors so we do not become impaired?

Sleep disorders, and sleep related phenomenon are a part of the total health picture. Some who occasionally experience sleeplessness over a period of a night or two cannot relate to the individual who experiences nightly sleep apnea episodes, leaving him to wake up literally hundreds of times a night gasping for breath with accompanying cardiopulmonary distress. Or that of the narcoleptic patient who, even against his/her will, falls asleep while eating dinner, or talking, or driving on the freeway at 55 mph. Other sleep disorders include nocturnal myoclonus, an uncontrollable jerking of the legs that disrupts sleep. More familiar to many are insomnia, nightmares, and night terrors. Most often, individuals with chronic sleep disorders need medical diagnosis and treatment. The field has been most successful in treating some mechanical sleep related problems and disorders. You probably are aware that most major cities around the U.S. have an accredited Sleep Disorders Center, usually affiliated with a major medical center.

There is, however, a multitude of things we do not know about sleep, and treatment of sleep related disorders. For instance, some may believe the sleeping brain is inactive, or resting. Quite the opposite is true. Though we experience sleep as a "time out", this is misleading. The sleeping brain is just as active as the waking brain, and is often more active. As well, the sleeping brain performs completely different functions than the waking brain. A patient with heart disease or lung disease may appear stable and well-managed during wakefullness, yet have hundreds of life-threatening problems during sleep. We must understand sleep's functions before we can move on to improve the quality of life of those who suffer sleep disorders. We hope we can investigate these factors to better understand illnesses of the sleeping brain, such as sudden infant death syndrome, narcolepsy, stroke, heart attack and epilepsy, and how drugs and alcohol impair sleep.

Because your subcommittee has expressed an interest, the National Institutes of Health has begun development of a Trans-Institute Coordination Committee for Sleep Research. Quite frankly, we are thrilled with this opportunity to begin a concerted effort to develop a Trans-NIH policy and mechanism for specifically targeted sleep disorders research. Soon the

Trans-NIH Committee will convene for its first official meeting of representatives from the various institutes, federal agencies, and the sleep research field. We hope to embark on a successful effort to establish a specific focus of NIH research resources towards sleep disorders. Certainly we intend to keep your subcommittee appraised of our progress.

Another development that is very exciting to our field is a proposal being considered at the National Heart, Lung and Blood Institute that would facilitate the development of a Specialized Center of Research (SCOR) in Cardiopulmonary Disorders of Sleep. The objectives of this Specialized Center of Research Program would be to stimulate a multidisciplinary approach to integrate basic sleep research, as it relates to the heart and lungs, to recognizable clinical cardiopulmonary disorders of sleep, and to assure that advances in basic sciences are rapidly translated into effective clinical procedures. Dr. Claude Lenfant mentioned this proposal when he appeared before you earlier this year. The Association of Professional Sleep Societies is highly supportive of this proposal and would like to respectfully encourage your subcommittee to provide adequate centers allocation and funding for this new initiative.

Mr. Chairman, every year we are faced with challenges posed by the Administration under the guise of forward funding, or carry-overs, or advanced appropriations, or whatever. Everyone in the biomedical research community, and those millions of Americans who benefit from scientific and medical advances are appreciative of the unyielding support and wisdom that you and your Subcommittee provides each year during consideration of funding for the nation's health programs. We do not take this for granted, Mr. Chairman.

The Association of Professional Sleep Societies supports the overall NIH recommendation of $7.4 billion for FY'88, consistent with that of the Ad Hoc Group for Medical Research Funding, of which we are a member.

Senator HARKIN. Dr. Mitler, thank you very much for your statement.

You did not give any amount that you are specifically interested in seeing go for sleep research, did you?

Dr. MITLER. Mr. Chairman, sleep research cuts across all of the Institutes. It is very difficult to come up with a dollar figure that we could request.

Senator HARKIN. I see. You are just asking for a full funding level, total, for NIH?

Dr. MITLER. Yes, sir.

Senator HARKIN. OK.

Thank you very much, Doctor.

Next is Trudy Engle, the American Health Education Foundation.

STATEMENT OF GERTRUDE ENGEL, HEALTH ADVOCATE, AMERICAN HEALTH EDUCATION FOUNDATION

Ms. ENGEL. Thank you very much, sir, for this wonderful opportunity.

I came to tell you that I am one woman in America who does not ask for money.

Senator HARKIN. Well, that is very good.

Ms. ENGEL. But I thought you would enjoy an update on the work that I have been doing here for 18 years.

Senator HARKIN. Would you pull the microphone a little bit closer, please.

Ms. ENGEL. For 18 years now I have been helping cancer victims and trying to save their lives. They are expecting 450,000 cancer victims to die this year.

Dr. Howard Baylor, from the Harvard Medical School, said, "The war on cancer has failed. After 30 years and millions of dollars spent, we do not have a cure."

Now I have done considerable research and have been highly accepted, in fact, honored, by the House of Representatives on October 1, 1986, for my untiring efforts to preach love and understanding among people and to tell them what they can do. People from all over the country call me and cry over the telephone as to what they should do with their cancer.

Now, what we have suggested, and my research shows, for relief of pain is that they should use laetrile. Laetrile is used by 1,000 doctors and 23 States have legalized it. The bad feature of the whole thing, that has brought tears to me, all these years, is the fact that every time somebody in the FDA or somebody in the Attorney General's Office decides to take the case to court that we don't need laetrile. They are all wrong.

Nobody has tried more than I have. I have had 30 years of experience, since the age of 9, to help and be around cancer victims, including my own mother. I am now married to a man who has had the same operation that President Reagan had and has had eight surgeries since then and is expected to have a ninth one.

What I am going to try to tell you is that it is unfortunate that the attorneys in the FDA and the lawyers working for Mr. Meese's office have nothing else to do but to worry about how they can get rid of laetrile for cancer victims, which I think is a very sad affair.

I am pleading with everybody.

Mr. Goodling introduced a bill, H.R. 4651, saying that under the care of a physician, the way Judge Luther Bohanon in Oklahoma ruled, cancer victims suffering from pain under a doctor's prescription should be able to purchase laetrile.

I think that is a wonderful decision because I was in the courtroom and complimented the judge. He said to go back and tell everybody in Washington that this is my ruling and I said, "With the help of the Lord," and he said that that is true.

Now, we can help cancer victims. I am asking everybody to write to their Congressman and support the bill, not financially but morally. I will do all the publicity on it.

I have traveled into eight States. I am a volunteer for the White House in connection with cancer victims. I don't know what else to do but to plead to everybody to please believe in what I tell them, because I am the one who has had the experience. As I said, 30 years has been a long time to cry.

What we have to do to get this bill, sir, is to get rid of the smugglers. They have moved in on this again.

PREPARED STATEMENT

It is interesting the way the smugglers want to bring laetrile from the foreign countries, when we have 40 countries right now that have legalized the use of laetrile.

I thank you very much.

[The statement follows:]

LETTERS FROM SENATOR STROM THURMOND

APRIL 16, 1987.

Ms. GERTRUDE ENGEL,
2450 Virginia Avenue, NW
Washington, DC

DEAR GERTRUDE: Enclosed please find a copy of the letter I wrote to Dr. Frank E. Young, Commissioner of the Food and Drug Administration. I will forward to you his response when I receive it.

It was a pleasure for me to look into this matter for you, and I trust that Commissioner Young's response will be informative.

With kindest regards and best wishes,

Sincerely,

STROM THURMOND.

Enclosure.

April 16, 1987.

Dr. Frank E. Young,
Commissioner, Food and Drug Administration,
14-71 Parklawn Building, 5600 Fishers Lane, Rockville, MD

Dear Dr. Young: It has recently been pointed out to me that laetrile, when used under the direction of a physician, may be an effective pain reliever.

However, it is my understanding that section 505 of the Federal Food, Drug and Cosmetic Act precludes the interstate manufacture and sale of laetrile for pain relief, even under the direction of a physician, unless the Food and Drug Administration [FDA] has made certain findings relating to effectiveness and safety.

I would greatly appreciate the views of the FDA on the possibility of laetrile being used under limited circumstances for the relief of pain. Concerns have been expressed to me that many Americans in terminal conditions would benefit from the availability of laetrile.

I look forward to hearing from you regarding this important matter.

With kindest regards and best wishes,

Sincerely,

Strom Thurmond.

Statement of Gertrude Engel

Judge Luther Bohanon, U.S. District Court for the Western District of Oklahoma, once again conducted hearings on the laetrile controversy with great compassion and fearlessness.

The honorable handsome judge is blessed with a calm and gracious manner with sympathy and goodness. He is sensitive to the terminally cancer victims' cry of pain and the seriousness of the disease.

He described with wonderful clearance and brevity that he was not responsible for past procedures of dissolving the rights to obtain laetrile with the affidavit system signed by a physician.

The U.S. Court of Appeals for the Tenth Circuit in 1981 denied a petition to vacate any orders making available laetrile to cancer victims. In 1984, a change of heart occurred and Judge Bohanon was asked to dismiss the former petition. Why?

It was then, the Food and Drug Administration issued a compassion plea stating, "All cancer victims using laetrile in the past could still obtain the laetrile, but no-no for new patients." Hence, it resulted in a renegotiation motion filed with the court.

In October 1978, I did the research for the brief amicus curiae which was placed on the docket of the Supreme Court of the United States. The Supreme Court did not ban laetrile. In June 1979, the court in a 9-to-0 decision remanded the case back to the appeals court.

I remember Justice Thurgood Marshall's remark, "Should we sitting in a court of equity decide the fate of laetrile?" The then Solicitor General Wade McCree, who defended the FDA said, "I am wondering about that myself." Court adjourned.

Laetrile was described in the Journal of American Medicine as nontoxic and clinically safe. It provides substantial benefits to the patient, relieves excruciating pain and bestows a relative sense of well-being.

President Ronald Reagan told me in a face-to-face dialog, "I am for laetrile, efficacy or not—freedom of choice, tell the world." We did.

After four doctors testified, Bohanon ruled that the current affidavit system would remain intact. Objections offered by the Food and Drug Administration's attorney were overruled.

It was an honor and a privilege to talk with Judge Luther Bohanon after the hearings. The judge agreed with the President. I showed him my outline of many factual assertions and features, which he asked me to submit in more elaborate detail.

Throughout the years my experience was to combat issues and fight for life. I constantly kept the court notified and I am as happy as a lark today with the decision.

This never-ending issue reverberates in the courts since 1974. We were told that a loophole was found, again, the grandfather clause—this technicality was resolved to

Judge Luther Bohanon's satisfaction in April 1977. He created the affidavit system under the care of a doctor.

We humbly request, please, that any further litigation be withdrawn. Twenty-three States approved the use of laetrile. I removed my sign "Weep no more my lady" and instead posted, "Expect a miracle, God is on your side."

My personal tragedy, "Thirty years is a long time to cry."

Thank you sincerely.

As of March 5, 1983, 24 States legalized laetrile: Alaska, Arizona, California, Colorado, Delaware, Florida, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Montana, Nevada, New Hampshire, New Jersey, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Washington, and West Virginia.

The late Shah of Iran, Mohammad Reza Pahlavi, used laetrile for a period of 6 years, as I learned during an off-the-record conversation I had with him when he came to Washington. I saw him several times before he passed away. It is quite a story to tell.

Robert Henderson, Henderson Metabolic Services, Inc., Baltimore, MD, who would make an excellent witness re: Laetrile-amygdalin, submitted to me information from Rutgers University Medical School in New Jersey. This information stated that laetrile-amygdalin "was a good hydroxyl radical scavenger, which was found to be protective and can be tolerated at rather high doses; hydroxyl radical scavengers in general are known to be radioprotective and due to their scavenging may in some way alter radiation therapy."

It is interesting to note that the "Red Book for Pharmacists" listed amygdalin for sale without a prescription. Dr. Henderson remarked, "If it had not been useful in cancer, it would still be available today without a prescription."

On May 1, 1984, a compassion plea was granted for terminal cancer patients to receive laetrile—still in effect—under a doctor's prescription—the affidavit system—and I added, with the help of the Lord, the FDA did this.

Dr. Manual Navarro reports laetrile used in the Philippines 18 years, also, Italy, Japan, Mexico, East and West Germany, France, and Israel.

Memorial Sloan-Kettering.—A researcher working with patients and using laetrile with satisfactory results was almost forced to resign because of the Institution's reluctance to mention the findings. Dr. Kanemasto Sugiura's results were contradicted. 50,000 to 75,000 patients are administered laetrile in Canada. "Relief from pain and an improvement in well-being—positive benefits—reduce damage of harmful effects in chemotherapy and radiation."

Rutgers University research published in SCIENCE 1983: "Laetrile the most powerful free radical hydroxyl scavenger and can be given at very high doses."

Dr. Dean Burk—Dean Burk Foundation, Inc., pages 10 and 11 of the Amicus Curiae brief, reviews controlled experiments have shown definite laetrile anticancer action. Dr. Burk is now retired, having been associated with the National Cancer Institute for 35 years and held in high esteem.

Arlin J. Brown, founder of the Arlin J. Brown Information Center, is a long-time student of cancer and its causes, who has the books, articles, and reprints with the effectiveness and successes of laetrile. He publishes his Health Victory Bulletin every month.

My exclusive interview with movie star Fred MacMurray focused on his battle against cancer using laetrile.

Rev. Thomas Munson, Clearwater, FL, is thankful that the Florida Medical Board renewed faith in laetrile. He claims laetrile saved his life.

Representative Bill Goodling of Pennsylvania is a remarkable congressional statesman. He cares.

We praise, appreciate, and admire him for introducing H.R. 651 to allow nontoxic and clinically safe laetrile under the care of a physician for pain relief for cancer victims.

Twenty-three States have legalized the use of laetrile. It is used in Mexico, Germany, Canada, and numerous other foreign countries.

We need your help. Please write or call your Congressman to cosponsor and support this measure.

Make this law a reality.

Thank you sincerely.

Love, peace, and health to the world. Pass it on.

[H.R. 651]

A bill to provide that the effectiveness requirements of the Federal Food, Drug, and Cosmetic Act shall not apply to laetrile in certain cases.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in the administration of section 505 of the Federal Food, Drug, and Cosmetic Act, the effectiveness requirements of such section shall not be applicable to laetrile when used under the direction of a physician for the treatment of pain.

Senator HARKIN. I am sorry for all the noise you just heard.

Ms. ENGEL. Did you hear me, sir?

Senator HARKIN. Yes; but there is a vote going on right now.

Thank you very much.

Ms. ENGEL. Well, I thank you, and I will tell you something. Unless we all work together on this, nobody will realize, unless they are sensitive to the feelings of other people who are suffering, will we ever know what to do. And we cannot allow the smugglers in with laetrile when we can get a bill passed on this saying for relief of pain. That is all we are asking for.

Thank you, sir.

Senator HARKIN. Thank you, Ms. Engel.

I can take one more witness here before I have to go. We will proceed out of order briefly because someone has to catch a plane.

STATEMENT OF EDWARD W.D. NORTON, M.D., RASCOM PALMER EYE INSTITUTE, MIAMI, FL, AND CHAIRMAN, DEPARTMENT OF OPHTHALMOLOGY, UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

Senator HARKIN. Next is Dr. Edward Norton, Rascom Palmer Eye Institute of Miami. Dr. Norton, welcome to the subcommittee. Please proceed.

Dr. NORTON. Thank you, Senator Harkin.

I am here today to present the Citizen's Committee budget recommendations for the National Eye Institute under the auspices of Research to Prevent Blindness, the world's leading voluntary organization in support of vision research.

You have my written testimony and it is on file.

I just want to make a few remarks. I think that blindness at any time in life is a tragedy, and in two polls conducted over two decades, the American people have expressed that their greatest fear, next to cancer, is that of blindness.

Not only is a tragedy, but it costs over $14 billion a year.

Unfortunately, blindness is still with us, and I think that unless we invest in research, we are not going to prevent it.

Research is the key to tomorrow.

In its wisdom, Congress has appropriated money for clinical research, and we have had a major advance in the prevention of blindness associated with diabetes.

As a result, the Congress invested $10.5 million, and it is estimated that we are saving $450 million a year in the prevention of blindness.

We have had a similar thing in macular degeneration.

So you can see that investing in research, both basic and clinical, is an effective way of spending your money.

In addition, we need to expand our laboratories, and we need to train young investigators.

In summary, gentlemen, I have watched over 40 years the advances made in the prevention of blindness. We have gone a long way, due to the efforts of previous investigators, but we have a long way to go. I would not want to see the momentum that we have developed be stifled by failure to respond and support the Citizen's Budget which has been arrived at by the visual scientists of this country.

Thank you very much for allowing me to testify and I will answer any questions.

PREPARED STATEMENT

Senator HARKIN. Thank you very much, Dr. Norton. I do not have any questions. But thank you very much for your fine statement.

[The statement follows:]

STATEMENT OF EDWARD W.D. NORTON

My name is Dr. Edward Norton. I am Medical Director of the Bascom Palmer Eye Institute and Professor and Chairman of the Department of Ophthalmology at the University of Miami School of Medicine in Miami, Florida. I am here today to present the Citizens' Committee Budget Recommendations for the National Eye Institute for Fiscal Year 1988 under the auspices of Research to Prevent Blindness (RPB), the world's leading voluntary organization in support of vision research.

Gentlemen, I have been in ophthalmology for the past 40 years and I remember first-hand how helpless I felt as a physician when I was confronted with a young woman who had just lost her sight from the vitreoretinal complications of diabetes. I remember, too, trying to console a 65-year-old man who had just reached his life's dream of retirement only to have his dreams dashed by the onset of retinal hemorrhages that destroyed his reading vision.

Blindness at any time in life is a personal tragedy. The American public fears blindness second only to cancer, according to two Gallup Polls* conducted more than a decade apart. In addition to the human tragedy, blindness costs the American people more than $14 billion a year.

Due to the investment over the past two decades that you, the Congress, have so wisely made in vision research, I am happy to say that at least two-thirds of the diabetics with vitreoretinal disease and another two-thirds of the aged with exudative macular degeneration can have their vision preserved today. You be the judge of the value of that achievement, not only in dollars returned on the investment but, more importantly, the quality of life for literally millions of people.

Unfortunately, blindness is still a major problem: more than 11,000,000 Americans have significant visual impairment; 1.4 million of these have severe loss of vision, and more than 500,000 Americans are legally blind.

The progress I have witnessed over the past four decades in reducing this problem has been the direct result of research. Without research we cannot continue to reduce, nor ultimately eliminate, these tragedies. The late William L. McKnight, as president and chairman of the Minnesota Mining and Manufacturing Company (3M), adopted for his corporation the slogan, "Research is the Key to Tommorrow." That maxim may well be our guiding principle in dealing with the multitude of widespread, largely unmanageable diseases that lead to visual failure. For, while research is costly, clinical trials conducted by the National Eye Institute have demonstrated that it is highly cost-efficient.

For example, the Diabetic Retinopathy Trial, which established the current successful standard for use of the laser in this condition, cost $10.5 million. It has been determined that the treatment developed as a result of this study reduces the incidence of blindness in these cases by 60 percent. The estimated annual saving is $454 million. Another clinical trial conducted by the Eye Institute established the efficacy of laser therapy of exudative macular degeneration, a major cause of blindness in the elderly. The trials demonstrated that this treatment delayed the onset of blindness in 75 percent of Americans with this form of macular disease, resulting in annual savings of an estimated $57 million. Yet the study cost only $1.56 million. Vision research is indeed cost effective.

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* Sponsored by Research to Prevent Blindness (RPB)

The value of such clinical trials cannot be overstated. The Eye Institute is prepared to launch a number of such additional studies in Fiscal Year 1988 if funds are made available. These include the assessment of acyclovir and other antiviral drugs in the treatment of ocular herpes infections; the testing of anti-clotting agents in the treatment of retinal vascular occlusions; and the use of laser therapy in macular edema in central vein occlusion. These and other newly-developed therapies may well be termed "the keys to tomorrow." Their clinical trial merits the full support of the Congress.

An effective research effort requires a large number of well trained, talented laboratory and clinical investigators, adequately supported so they can direct their efforts to solving those problems that are close to being solved and unlocking new doors to problems that today seem unsolvable. In these laboratories, it is essential that young investigators are trained, not only for what they can contribute today, but because they are essential to our future efforts. We cannot afford to lose our research momentum with an "investigator gap."

Modern laboratories and equipment are essential if the investigators' efforts are to be maximized. The American people have voluntarily donated millions of dollars to create vision research laboratories. Congress can and must recognize and stimulate such gifts by appropriating matching monies.

The National Advisory Eye Council of the National Eye Institute has recently re-evaluated its Five Year Plan (1983-1987): A National Plan for Vision Research. The 1988 Citizens' Budget represents the same concerns of senior scientists that produced and reviewed that plan. It has the strong endorsement of Research to Prevent Blindness.

Research supported by the National Eye Institute is classified into five program areas. These include: retina, cornea, cataract, glaucoma, and strabismus and visual processing.

In my opening remarks, I have touched upon diabetic retinopathy -- the leading cause of blindess for Americans under 65, and macular degeneration -- the leading cause of blindness for Americans over 65. In my lifetime, with the support of the National Institutes of Health and the National Eye Institute, I have seen striking improvement in our ability to restore or preserve sight in patients with retinal detachments, vitreoretinal diseases, diabetic retinopathy and exudative macular degeneration. However, there are still far too many patients we are unable to help, especially the premature infant with retinopathy of prematurity, the elderly with non-exudative age-related macular degeneration, and the rapidly-growing number of those with virus infections of the retina, especially among patients afflicted with acquired immunodeficiency syndrome (AIDS).

Corneal disease afflicts some 3.7 million Americans and infection with the Herpes Simplex virus is the leading cause of corneal blindness. While active research is proceeding, an effective drug or vaccine is needed. Corneal blindness is often treatable with a corneal transplant. Considerable progress has been made in the technical aspects of transplant surgery, but new laser developments currently under investigation may revolutionize this procedure and, in fact, all corneal procedures.

Cataract is the most common cause of visual impairment in the United States and cataract extraction is probably the most prevalent and successful surgical procedure in the United States. When accompanied by a simultaneous implantation of an intraocular lens, it is probably the most satisfying to the patient. Cataract surgery is now being done routinely as an outpatient procedure at an estimated savings of $500 million each year. Yet, this savings is only a fraction of the savings in both dollars and human suffering that could be realized if research is successful in finding a way to prevent or at least delay the formation of cataracts. This is a high priority program.

Glaucoma, a condition in which the pressure in the eye is too high, thereby resulting in loss of vision, affects about 2% of Americans over 40. It is estimated that more than 60,000 of these are legally blind. In the last decade, significant progress has been made in the development of topical medications which lower the intraocular pressure, as well as laser treatment that improves the drainage mechanism of the eye, thereby preserving vision. A National Collaborative Study is currently underway to determine if cytotoxic drugs used in the immediate postoperative period will reduce scarring, thus allowing the artificially created drainage system to remain open. This has the potential of being a major advance in the treatment of those cases of glaucoma which, to date, have proven resistant to all forms of treatment.

The eye is truly the window to the brain. The retina develops as an outpouching from the brain, the optic nerve behaves like the spinal cord, and the connections within the brain that control eye movements and hand-eye coordination are among the most complex in the human body. The National Eye Institute research program in strabismus, amblyopia, and visual processing touches on these most intricate systems.

Because of the ability to examine these isolated structures, the eye and its connections have been, and continue to be studied, not only by those interested in vision but also those interested in fundamental nervous system activity.

Currently, investigators are actively evaluating the ability of brain cells in the retina to regenerate or to develop new functions to compensate for damage. This information will have applications in our understanding and treatment of a wide variety of brain disorders.

The 1988 Citizens' Budget has been carefully reviewed by senior scientists. It addresses the needs in each of the five major vision research program areas, including funds for essential construction, laboratory renovation and instrumentation. In addition, it emphasizes the need to continue research training if we expect the next generation of vision research scientists to build on the accomplishments of the past and present generations.

The Congress can be proud of the outstanding Intramural Program that has been developed within the National Eye Institute. These accomplishments have earned the respect of vision scientists throughout the world. The needs of that program are addressed in the Citizens' Budget.

In summary, gentlemen, I have observed first-hand over the past two decades the accomplishments of the Vision Research Program you and your colleagues have supported. Significant progress has been made in each of the program areas, but much remains to be done. We must not let the momentum of the Vision Research Program falter. All Americans, young and old, are dependent on the sense of sight for survival -- for work, for education and communication, and also for enjoyment of whatever leisure time they may have earned.

I earnestly request that this Committee recommend approval of the Citizens' Budget of $275,710,000 for the National Eye Institute for Fiscal Year 1988. Proposed expenditures are specified in the Financial Tables appended to my statement.

I sincerely appreciate the opportunity to present this testimony, and will be pleased to respond to any questions.

NATIONAL EYE INSTITUTE
CITIZENS' BUDGET
(Dollars in Thousands)

	FY 1987 Appropriation	FY 1987 President's Revised Request	FY 1988 President's Budget Request	FY 1988 Citizens' Budget
BY ACTIVITY:				
Grants:				
Research grants.....	$169,845	$154,654	$154,383	$217,210
Laboratory renovation, construction and instrumentation.....	2,250	2,250	0	6,000
Core and center grants..............	6,718	6,718	6,718	8,200
Individual training............	2,237	2,237	2,237	4,000
Institutional training............	3,432	3,432	3,432	4,000
Total Grants........	184,482	169,291	166,770	239,410
Direct Operations:				
Intramural laboratory and clinical research...	17,764	17,764	18,195	19,400

NATIONAL EYE INSTITUTE
CITIZENS' BUDGET (continued)
(Dollars in Thousands)

	FY 1987 Appropriation	FY 1987 President's Revised Request	FY 1988 President's Budget Request	FY 1988 Citizens' Budget
Research and development contracts...........	6,850	6,850	6,850	8,000
Biometry, epidemiology and field program.......	1,200	1,200	1,300	1,600
Research management and program services............	6,478	6,478	6,905	7,300
Total Direct Operations..........	32,292	32,292	33,250	36,300
TOTAL NEI OBLIGATIONS.........	216,774	201,583	200,020	275,710
BY PROGRAM:				
Extramural Research:				
Retinal and Choroidal Diseases..	$ 85,267	$ 79,008	$ 78,895	$113,200
Corneal Diseases....	31,768	29,042	28,993	41,595
Cataract............	15,149	13,849	13,825	18,345
Glaucoma............	17,002	15,543	15,517	20,600
Strabismus, Amblyopia, and Visual Processing...	39,896	36,449	36,390	47,670
Laboratory Renovation, Instrumentation and Construction....	2,250	2,250	0	6,000
Total Extramural Research............	191,332	176,141	173,620	247,410
Intramural Research:				
Laboratory and Clinical Research, Biometry and Epidemiology........	18,964	18,964	19,495	21,000
Research Management and Program Services	6,478	6,478	6,905	7,300
Total Intramural Research............	25,442	25,442	26,400	28,300
TOTAL NEI OBLIGATIONS	216,774	201,583	200,020	275,710

STATEMENT OF MORTON GORN, PRESIDENT, REMINGTON MANAGEMENT CO.

Senator HARKIN. I believe I have time for one more witness.

Let us now go to Morton Gorn, president of the Remington Management Co.

Welcome to the subcommittee.

Please proceed.

Mr. GORN. Mr. Chairman, members of the subcommittee, over one-half million Americans are paralyzed as a result of spinal cord injury. Twenty thousand more injuries are added each year. The average age at the time of injury is 19.

Most injuries are motor vehicle accidents. The cost to the Nation is an estimated $6 billion annually. For every $400 spent on care and coping, only $1 is spent on pure research.

Sustaining one quadriplegic during his or her lifetime can run up to $5 million.

Spinal cord injuries, therefore, remain a major public health problem that needs to be addressed through an extensive range of research activities. Comprehensive spinal cord research centers should be developed or existing centers expanded.

This requires funding.

One Sunday in December 1982, all of my family's lives changed very abruptly. A car accident severely injured my daughter, Karen, at age 28, and has left her a quadriplegic. My daughter is a registered nurse, is married, and at the time of the accident had a daughter, age 6, and a son, age 4.

I came face to face with such despair, such anguish, such anger, such misery, that are beyond description. I had never heard the word "quadriplegic" before that Sunday. But now, it is the foremost thing on my mind.

Quadriplegia is a paralysis of the body's arms and legs and a loss of bodily functions, including bladder and bowel control, and a loss of human dignity: a functioning brain in a body unable to perform.

In a millisecond, your life can change like mine. Who is next? Maybe one of your loved ones.

It happens to more than five persons per hour, and that is final. There is no cure. There is no help today.

But, with your help, tomorrow your loved ones and my loved ones can be out of a wheelchair.

If we could put a man on the moon 20 years ago, if we could find the answer to polio, and to tuberculosis, if we can create artificial and implanted organs and all the other sophistications of our modern science, certainly we can cure spinal cord injuries.

PREPARED STATEMENT

America has been the stronghold of world science discovery. Therefore, I kindly request this subcommittee to increase the funds given to the National Institutes of Health by $15 million more in this year to help the leaders in this field make progress on recovery.

Thank you.

[The statement follows:]

Statement of Morton Gorn

Over one-half million Americans are paralyzed as a result of spinal cord injury. 20,000 more injuries are added each year. The average age at the time of injury is 19. Most injuries are motor vehicle accidents. The cost to the Nation is an estimated $6 billion annually. For every $400 spent on care and coping, only $1 is spent on pure research. Sustaining one quadriplegic during a lifetime can run up to $5 million.

Spinal cord injuries, therefore, remain a major public health problem that needs to be addressed through an extensive range of research activities. Comprehensive spinal cord research centers should be developed, or existing centers expanded. This requires funding.

One Sunday in December 1982 all of my family's lives changed very abruptly. A car accident severely injured my daughter Karen at age 28, and has left her a quadriplegic. My daughter is a registered nurse, is married, and at the time of the accident had a daughter age 6, and a son age 4. I came face to face with such despair, such anguish, such anger, and such misery that are beyond description. I had never heard the word "quadriplegic" before that Sunday, but now, it is the foremost thing on my mind.

Quadriplegia is a paralysis of the body's arms and legs and a loss of bodily functions, including bladder and bowel control and a loss of human dignity—a functioning brain in a body unable to perform.

In a millisecond your life can change like mine—who is next? Maybe one of your loved ones?

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America has been the stronghold of world science discovery, therefore, I kindly request this subcommittee to increase the funds given to the National Institutes of Health [NIH NINCDS] by $15 million more within this year to help the leaders in this field make progress on recovery.

Senator Harkin. Mr. Gorn, thank you very much for your testimony.

Because of your own personal situation, have you heard much about what the Soviet Union has done in terms of spinal cord injuries?

Mr. Gorn. I have heard, but I don't know how solid the facts are.

Senator Harkin. I am going to have to get some more information myself on that. I have heard that they have made some great strides on spinal cord victims in terms of regeneration, that kind of thing. I really don't know. But I am going to check into that myself and find out.

Mr. Gorn. If you find out, would you let me know.

Senator Harkin. Yes; I will try to get it out to the public.

Thank you very much.

I do believe I must leave to vote now.

The subcommittee will recess while I go to vote. Senator Proxmire will be here very shortly to pick this up. The recess will probably not be more than 5 or 10 minutes, at the most.

Thank you.

[A brief recess was taken.]

Senator Proxmire [presiding]. The subcommittee will come to order.

First, I apologize for being late. We had a vote on the floor and I had to run over to that, and thus, was delayed.

Our next witness will be Dr. Roy Albert, Association of University and Environmental Health Sciences Centers.

Dr. Albert, I understand that you are in a big rush.

As you may know, you have 3 minutes, sir. Go right ahead.

STATEMENT OF ROY E. ALBERT, M.D., ENVIRONMENTAL HEALTH SCIENCES CENTER, UNIVERSITY OF CINCINNATI MEDICAL CENTER, CINCINNATI, OH, ON BEHALF OF ASSOCIATION OF UNIVERSITY AND ENVIRONMENTAL HEALTH SCIENCES CENTERS

Dr. ALBERT. Thank you. My name is Roy Albert. I am professor of environmental health and chairman of the Department of Environmental Health of the University of Cincinnati Medical Center, and director of the NIEHS Environmental Health Research Center at this institution.

I am here to speak on behalf of the Association of University and Environmental Health Sciences Centers.

This association represents 15NIEHS sponsored environmental research centers throughout the United States, of which 10 are health oriented, and 5 focus on the relationship between health and the quality of fresh and marine water.

The biomedical research centers include Harvard, New York University, Mount Sinai School of Medicine, Johns Hopkins, Rochester University, Vanderbilt, Oregon State University at Corvallis, the University of California at Berkeley, the Massachusetts Institute of Technology, and the University of Cincinnati.

The Marine freshwater biomedical centers——

Senator PROXMIRE. Also I have here the Medical College of Wisconsin.

Dr. ALBERT. That is what I was going to come to.

Senator PROXMIRE. That's great. Go right ahead, sir.

Dr. ALBERT. The marine freshwater biomedical centers include Duke, the University of Washington, the Medical College of Wisconsin, Oregon State, and the Mount Desert Island Biological Laboratory in Maine.

The center's program began about a quarter of a century ago, when the NIEH was in its formative years. The center concept was simple. For a relatively modest investment, the NIEHS would set up core programs in prestigious universities and these programs would give partial, but stable, salary support to a multidisciplinary cadre of professors. This faculty would create research centers oriented to environmental health problems, drawing on the extensive, multidisciplinary resources available to them in their own universities.

The support for such centers would, thus, serve as a catalyst, where most of the money would come from other sources, particularly competitive grants. The concept proved to be highly successful in that the centers consistently have been a major force in the NIEHS research and training program.

Although the centers represent only 8 percent of the NIEHS budget, they enlist a formidable group of university professors, numbering over 260. Many of the research highlights presented over the years by doctor Rall in his congressional testimony represent ongoing work at the centers. In addition to research and training, the centers constitute an important consultative resource for Federal, State, and community agencies.

Research in the centers deals with a wide range of problems that must be solved if we are to keep our technology-intensive society protected against the toxic products and byproducts of industry. We have come to learn that defining what is adequate protection is not simple. Chemicals produce subtle and important health damage, even at low levels of exposure: cancer, birth defects, genetic disorders, reproductive disorders, and so on.

In order to predict the nature and magnitude of health risks at environmental levels of exposure, we need to know how chemicals produce their toxic effects, namely to understand their biological mechanisms of action, and this takes us into the realm of basic biomedical processes.

The range of research covered by the centers includes 14 major programs, and the depth and diversity of the research centers' programs are indicated by the highlights that are attached to this testimony.

In closing, I might say that the major contribution that the centers are making to the NIEHS program have enabled the NIEHS to achieve world leadership in environmental research and training. We, therefore, ask that the centers' program continue to be supported at an effective level, with a budget that adjusts for inflation and provides for the kind of modest increase in funding that is necessary to keep the centers flexible and dynamic.

Thank you.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very, very much, Dr. Albert. We very much appreciate your fine testimony.

I am delighted to know that the Medical College of Wisconsin was represented.

[The statement follows:]

STATEMENT OF ROY E. ALBERT

My name is Roy Albert. I am Professor of Environmental Health and Chairman of the Department of Environmental Health at the University of Cincinnati Medical Center and Director of the NIEHS Environmental Health Research Center at this institution.

I am here to speak on behalf of the Association of University and Environmental Health Sciences Centers. This Association represents 15 NIEHS-sponsored Environmental Research Centers throughout the United States of which 10 are health oriented and 5 focus on the relationship between health and the quality of fresh and marine water. The biomedical research centers include: Harvard University, New York University, Mt. Sinai School of Medicine, Johns Hopkins University, Rochester University, Vanderbilt University, Oregon State University at Corvallis, University of California at Berkeley, Massachusetts Institute of Technology and the University of Cincinnati. The Marine/Freshwater Biomedical Centers include Duke University, University of Washington at Seattle, the Medical College of Wisconsin, Oregon State University at Corvallis and Mt. Desert Island Biological Laboratory in Maine.

The Centers program began about a quarter of a century ago when the NIEHS was in its formative years. The Center concept was simple: for a relatively modest investment, the NIEHS would set up core programs in prestigious universities that would give partial but stable salary support to a multidisciplinary cadre of professors; this faculty would create research centers oriented to environmental health problems drawing on the extensive multidisciplinary resources available to them in their own universities. The support for such Centers would thus serve as a catalyst where most of the money would come from other sources, particularly competitive grants. The concept proved to be highly successful in that the Centers have consistently been a major force on the NIEHS research and training program. Although the Centers represents only 8% of the NIEHS budget, they enlist a formidable group of university professors numbering over 260. Many of the research highlights presented over the years by Dr. Rall in his Congressional testimony represent ongoing work at the Centers. In addition to research and training, the Centers constitute an important consultative resource for Federal, State, and Community Agencies.

Research in the Centers deals with a wide range of problems that must be solved if we are to keep our technology - intensive society protected against the toxic products and by-products of industry. We have come to learn that defining what is adequate protection is not simple: chemicals produce subtle and important health damage even at low levels of exposure: cancer, birth defects, genetic disorders, reproductive disorders, and damage to the brain, lung, kidney, and other organs. In order to predict the nature and magnitude of health risks at environmental levels of exposure we need to know how chemicals produce their toxic effects, namely to understand their biological mechanisms of action, and this takes us into the realm of basic biomedical processes. The range of research covered by the Centers includes 14 major program areas in which two or more of the Centers participate interactively; these programs include: metal toxicology; neurological and behavioral toxicology; developmental and reproductive toxicology; radiobiology; respiratory toxicology, biochemical toxicology; biological markers of exposure and effects; environmental chemistry, immunotoxicology; epidemiology and biostatistics; and combustion product toxicology. The diversity and depth of the Research Centers program is indicated by the 1986 research highlights from each of the Centers which are attached as an appendix to this testimony.

A few examples of the kinds of findings that the Centers have made include: discovering the carcinogenicity for humans of the industrial compound, bis-chloromethyl ether; discovering the link between cancer and arteriosclerosis by using the advanced techniques of molecular biology to find an oncogene in human coronary artery arteriosclerotic lesions; discovering the dangers to the newborn and infant of lead at hitherto unsuspectedly low levels of exposure; discovering the widespread and unexpectedly large exposure from unknown sources to cancer causing agents, amino-biphenyl and aniline by new and remarkably sophisticated biochemical methods; discovering that permanent asthma can be produced by a variety of irritant gases; discovering the importance of oxygen in producing irreversible genetic damage leading to cancer and aging.

The major contributions that the Centers are making to the NIEHS program has enabled the NIEHS to achieve world leadership in environmental research and training. We, therefore, ask that the Centers program continue to be supported at an effective level: with a budget that adjusts for inflation and provides for the kind of modest increase in funding that is necessary to keep the Centers flexible and dynamic.

APPENDIX

Highlights of NIEHS Environmental Health Sciences Center Research in 1986

Harvard University

Radiobiology

There is continuing concern for the mutagenic and carcinogenic effects of continuous, low-level exposure to radiation from environmental and man-made sources. Of increasing recent concern has been exposure to densely ionizing radiation from sources such as radon decay products in homes, and neutrons in certain occupational groups such as crews of submarines and workers in nuclear weapon production plants. We have previously shown that the induction of mutations in human cells by x-rays is independent of dose rate, even when the radiation exposure is protracted over periods up to 30 days. That is, the mutagenic effects of radiation are cumulative and additive.

We have recently initiated experiments to examine the mutagenic effects of continuous, low level exposure to neutron radiation. Preliminary results indicate that continuous, low dose rate exposure to fast neutrons protracted over periods of 5 to 20 days was more mutagenic than acute neutron irradiation. These findings are of considerable potential significance in terms of setting safe exposure standards for densely ionizing radiation such as neutrons. It has generally been assumed in the past that the acute exposure situation was the most hazardous one. These new results suggest that protracted, low level exposure may actually be more dangerous.

Occupational Health

An important focus of research has been the role of occupation in the development of non-malignant respiratory disease. Research has been conducted or is in progress on working populations exposed to solder in the electronics industry, cotton dust in the textile industry, polyvinyl chloride fumes in the food processing industry, beryllium dust in the metals industry, silicon carbide dust in the grinding industry and cutting oils in the automotive industry. By relating levels of exposure to potentially toxic substances in the workplace to changes in pulmonary functions, we are able to recommend standards for exposure that will prevent future disease. For each of the substances noted above our recent work has contributed to a safer working environment.

Epidemiology

A variety of environmental factors have been explored in relation to cancer, respiratory disease and adverse outcomes of pregnancy. Studies are in progress to follow-up persons who have been exposed to radiation as part of therapy for tuberculosis, benign gynecologic disease, thyroid disease, Hodgkin's disease, or other cancers. By estimating the dose received to specific organs, improved knowledge of radiation carcinogenesis and of safe standards of exposure is obtained. In the Harvard Respiratory Health Study (the Six-Cities Study) adverse effects of maternal cigarette smoking and of indoor air pollution have been demonstrated on children. In several studies we have evaluated the effects on the fetus of maternal exposure to radiation, alcohol, coffee, marijuana, and contraceptive methods. No adverse effects on the fetus of moderate levels of coffee or alcohol consumption or of prior contraceptive usage was noted. A positive association between prenatal X-ray and childhood leukemia was noted, although a causal association could not be inferred with certainty.

Toxicology

Recent findings in three areas in the Laboratory of Toxicology are likely to contribute significantly to protecting the population from environmental health hazards.

1. New model systems in toxicology. A long standing problem in toxicity testing has been the difficulty and costliness of animal testing as a predictor of hazard for human health. Even the validity of extrapolating animal data to the human is often questioned. Scientists in the Laboratory of Toxicology have developed and used successfully methods for growing normal human and animal epithelial cells (skin, esophagus, bladder, vagina, uterine cervix) in culture under conditions in which normal patterns of differentiation can be measured and tissue-specific biochemical markers can be quantitated. These systems, using human cells, now allow determination of the mechanisms for tissue or organ selectivity of action of specific toxic chemicals. Furthermore, side by side comparisons enable the investigator to determine whether a given animal species is or is not appropriate predictor of target-specific toxicity in the human. These culture systems also enable deelopment of protective agents with high tissue selectivity.

2. Genetic toxicity. Based on previous discoveries by Laboratory of Toxicology scientists in bacteria, damage-induced DNA repair pathways have been identified and are being characterized in human cells. Human cells with defects in alkylation-damage repair have been found and suppression of the defects by transfection with exogenous DNA repair genes has been successful. These results should enable not only clearer understanding of fundamental aspects of DNA damage and reapir in human cells, but they will permit identification of individuals who are at risk for exposure to particular types of DNA-damaging agents in the environment.

Methods have also been developed which enable monitoring human body fluids (plasma and urine) for the presence of mutagens after environmental exposure. For example, it is readily possible to measure the mutagenic activity in urine within an hour after smoking a single cigarette.

3. Biochemical toxicology. The molecular mechanisms of action and toxicology of the human male contraceptive agent gossypol have been identified. These results indicate that gossypol is never likely to be a safe drug. On the other hand, they suggest new approaches for the development of safer male contraceptive agents.

The molecular basis for dioxin (2,3,7,8-TCDD) toxicity in human epidermis has been investigated and shown to involve the regulation of growth factor receptors and adenylate cyclase activity. Knowing these mechanisms, it has been possible to propose pharmacological approaches for preventing or reversing this most common human toxicity of TCDD.

The first radioimmunoassay for the class of tumor promoters known as phorbol esters has been developed. The high sensitivity of the method enables its application to screening of environmental samples for this generic group of tumor promoting agents.

Respiratory Biology

The primary interest of our program is the response of mammalian lungs to inhaled environmental agents. For example, we are interested in mechanisms of fibrogenesis, inflammation, and phagocytosis. The following are several areas where substantial progress has been made:

Bioassays for inhaled particulates. It is important to predict the risk of human pulmonary disease caused by exposure to complex and often poorly characterized dusts. Such dusts may arise in the workplace when new technologies are introduced or old ones modified; they also occur in urban environments for example, due to changes in patterns of energy utilization. We have developed a short-term (1-30 days post-exposure) animal bioassay system in which the toxicity of a particular dust may be estimated by comparison to known dusts with a demonstrated range of toxicities for human pulmonary disease. We employ hamsters exposed to dusts by intratracheal instillation and quantify the response by measuring biochemical and cellular indicators in bronchoalveolar lavage fluid (BAL).

The parameters measured represent a wide spectrum of possible responses to inhaled particles including: inflammation, pulmonary edema, cellular damage, cellular secretion, and endocytic capacity of pulmonary macrophages. We calibrated the system with dusts for which there is considerable human experience. Cellular and biochemical changes were measured in BAL of hamsters after exposure to alpha-quartz, iron oxide, and aluminum oxide. Alpha-quartz in a highly toxic, fibrogenic mineral dust, whereas aluminum oxide and iron oxide are both of low toxicity.

Another feature of our assay utilizing lung lavage is the time course of the response. Some agents will yield similar responses when examined soon after exposure. However, the more toxic material may frequently exhibit a more persistent elevation of cellular and enzymatic parameters than non-toxic controls.

Further parameters are being developed. We are also currently using this bioassay to study such diverse materials as talc, granite, urban dusts, automobile waste oil combustion products, cotton dusts, paper dusts, beryllium compounds, and mineral oils.

University of Cincinnati

The phase-out of lead usage in gasoline and prohibitions of lead usage in new paints for domestic usage have reduced lead exposures for most individuals. However, over one-fourth of the current U. S. housing stock that was built before 1940 when extensive interior and exterior use of lead-containing paints was commonplace, continues to be a source of exposure for many children. Research at the UC NIEHS Center has shown that even children residing in federally-subsidized, extensively-rehabilitated housing continue to be at risk due to lead-containing dusts that enter these otherwise virtually-lead free homes from nearby lead-containing structures. This research has important implications for current policy for rehabilitation of older housing that does not include adjacent properties that may be major lead sources and for the lead-contaminated soil remediation pilot program under the Superfund Amendments and Reauthorization Act of 1986.

Metals such as lead, mercury and cadmium are important environmental hazards affecting the nervous system. Research at the UC NIEHS Center has shown that each of these heavy metals has a unique pattern of damaging effects on nerve transmission which represents an important step toward an understanding of nerve function and the mechanism of metal neurotoxicity.

Advances were made in pinpointing the sites in kidney tubule cells where heavy metals like cadmium or mercury interfere with the reabsorption of filtered amino acid. These findings contribute to a better understanding of how the metals stimulate amino acid excretion, a primary sign of heavy metal poisoning.

Because the major portion of the heavy metals in the body is derived from food and water, continued research focused on the mechanism of metal absorption from the small intestine. Research at the UC NIEHS Center has provided good evidence in support of the view that the first step in this absorption consists of a rather non-specific binding reaction to the outside of the cell membranes in the gut, followed by a temperature-sensitive internalization step. It is possible to reduce the uptake of toxic heavy metals by saturating the binding sites with other, non-toxic metals.

Persons with asthma are known to be susceptible to air pollution. Research at the UC NIEHS Center has discovered that airway cells in response to inhaled air polloutants elaborate lipid mediators which are important in causing asthma.

Humans are continually exposed in the environment, diet and workplace to chemicals that produce toxicity or cancer. Research at the UC NIEHS Center has discovered a group of chemical derivatives of indole and indene compounds which have the capacity to intervene in the harmful effects which result from exposure to various toxins and carcinogens. Some of the mechanisms by which chemoprotective agents operate has been discovered. Since some of these chemopreventive compounds are natural dietary constitutents, this work has important implications in the formulation of cancer-preventing diets.

A class of chemicals called promoters, that enhance the development of cancer are thought to play an important role as environmental causes of cancer. Research at the UC NIEHS Center has shown that control over the release of important bioactive and toxic lipids from cells is altered following exposure to a tumor promoter. One possible consequence involves the suppression of the immune system. This finding is an important clue in attempts to determine the mode of action of tumor promoters.

Exposure of humans to environmental carcinogens can occur by eating plants. Research at the UC NIEHS Center has dicovered how plants produce carcinogens from organic combustion products.

Effective removal of biologically active substances from wastewater is recognized as an important task of municipal sewage treatment plants. Although the majority of treatment plants are not specifically designed to remove or destroy low levels of biologically-active compounds, studies by the UC NIEHS Center of six plants in Ohio showed that the levels of toxic mutagenic is significantly reduced by conventional treatment water. However, granular activated carbon (GAC) has received increasing attention as a means of further water purification treatment. Research at the UC NIEHS Center has shown that GAC effectively removes toxic pollutants long after conventional parameters have shown GAC effectiveness to be exhausted. This indicates that GAC regeneration would be less frequent and hence cheaper than originally believed.

The nation's sewer systems receive more than 30%of the hazardous wastes produced in the U.S.; this includes many volatile compounds. Research at the University of Cincinnati has established that conventional methods for assessing air pollution from sewers are inadequate, and new methods have been developed.

Mount Sinai School of Medicine

The goal of the Mount Sinai EHSC is to conduct research which identifies, ameliorates and ultimately prevents human diseases caused by toxic environmental agents. The Mount Sinai EHSC is unique among the nation's environmental health centers in its focus on human health.

Asbestos-Related Research. For the past quarter century, clinical and epidemiologic study of the diseases caused by asbestos has been the centerpiece of the research program at Mount Sinai. Previous studies have established relationships between asbestos exposure and three diseases: asbestosis, lung cancer and mesothelioma. Additionally, research conducted at Mount Sinai has established that a multiplicative interaction exists between asbestos and cigarette smoking in the causation of lung cancer; persons who are exposed to asbestos and who also smoke are 55 times more likely than unexposed persons to develop carcinoma of the lung.

The current focus of asbestos research at Mount Sinai is definition of early markers of asbestos disease. Through retrospective evaluation of X-rays and pulmonary function test data, investigators are seeking early predictors of subsequent disease. Recognition of such "biological markers" will permit early diagnosis and therapeutic intervention.

Biological Markers of Cancer. Recent advances in biochemistry and cell biology have identified a series of structural and functional changes in cells which are caused by exposure to environmental toxins and which may be powerful predictors of future occurrence of cancer.

Research is actively underway in the Mount Sinai EHSC to evaluate the possible applicability of biological markers in human studies. Major tasks are to standardize test procedures, define relationships between markers and environmental exposures, and finally to assess the ability of markers to predict cancer occurrence.

Initial studies are being undertaken in roofing workers heavily exposed to carcinogenic aromatic hydrocarbon compounds such as benzo(a)pyrene from pitch and asphalt.

Quantitative Risk Analysis. The new science of risk assessment finds increasing application in mathematical calculation of the disease risks associated with exposures to toxic environmental agents. Quantitative risk analysis permits ranking of regulatory priorities and identification of most dangerous chemicals. Research in quantitative risk analysis now underway at the Mount Sinai EHSC seeks to define precisely the long-term risks of exposure to asbestos and of exposure to vinyl chloride.

Disease of Heavy Metals. The heavy metals, particulraly lead and mercury, are ancient toxins but remain widespread in modern industrialized society. Studies of lead workers undertaken previously by the Mount Sinai EHSC documented hematologic and neurologic abnormalities. Current research is aimed at defining associations between chronic lead exposure, kidney disease, and hypertension. A question of particular concern is the extent to which end stage renal disease (ESRD) is related to lead exposure. These studies are assisted by state-of-the-art radiologic techniques for assessing long-term body burdens of lead in bone.

Within the past year, investigators from Mount Sinai have evaluated the toxic consequences of mercury poisoning among workers employed in thermometer plants and by the New York City Transit Authority. A particular focus of this research has been identification of subtle, but possibly irreversible neurologic changes. The studies indicate that workers with long-term mercury exposure in the subway system have serious decrements in their ability to perceive vibration; 42 per cent of workers with more than 15 years of exposure to mercury cannot feel vibratory sensation in their hands or feet.

Neurotoxicity. Investigations undertaken over the past decade in Scandinavia and in the United States indicate that chronic occupational exposure to solvents produces progressive loss of central nervous function, characterized by decreased intellect, diminished memory, alterations of mood, and feelings of anxiety. To delineate more precisely the origins of this puzzling syndrome, investigators from the Mount Sinai EHSC will embark in the next year on a prospective evaluation of young men newly employed as painter apprentices. These workers will be evaluated at the time of their entry into the painting trade and yearly thereafter for five years. Possible decrements in neurologic function associated with occupational exposure to solvents will be evaluated. Recommendations for disease prevention will be made.

Reproductive Loss and Video Display Terminals (VDTs): A Possible Association. Recent reports of clusters of spontaneous abortions (miscarriages) in women working with VDTs indicate a need to assess systematically the possible relationship between VDT use and reproductive loss. To that end, investigators from the Mount Sinai EHSC, in collaboration with major unions, are undertaking a prospective assessment of reproductive loss in office workers. This study will use ultra-sensitive assay of the hormone, human chorionic gonadotropin (hCG), as an indicator of early pregnancy and pregnancy loss. The study will evaluate 6,000 women over the next two years.

Violence Epidemiology. Violence is a major plague in American society. Recent studies suggest that murder, suicide, and other forms of violence can be evaluated by epidemiologic techniques and preventive strategies then developed.

Investigators from the Mount Sinai EHSC are evaluating causes of violent occupationally-related death in police officers. Through collaborative research with the Police Executive Research Forum and the Federal Bureau of Investigation (FBI), it has been ascertained that the death rates of police officers caused by handguns have decreased by nearly 50 per cent in the past decade; at the same time, rates of death caused by shotguns and rifles have continued unchanged. It is of major importance to identify the factors which account for this sharp decline in handgun deaths. In particular, the possible roles of improved police training, and wearing of bulletproof vests will be investigated.

Training of Epidemiologists. It is essential that the nation's pool of epidemiologists be expanded. The Mount Sinai EHSC has recently been awarded a large training grant by The Charles A. Dana Foundation. This grant award will enable us to train additional specialists in environmental epidemiology.

University of California, Berkeley

Measuring DNA Damage in Humans. A major project is the development of methods for determining which chemicals damage human DNA by examining individual people on a daily basis. Human DNA is damaged every day by a wide variety of chemicals. One of our approaches is to look in human urine (and rate urine in parallel animal experiments) for the DNA damage products (modified bases, ribonucleosides, and deoxyribonucleosides) that are excreted after DNA repair or DNA turnover.

The Relation of Oxidative DNA Damage to Aging and Cancer. Cancer increases with about the fourth power of age in short-lived creatures such as rats and mice and long-lived creatures such as man. Thus, during primate evolution, life span has increased markedly against a constraint of cancer versus the fourth power of age. Life span is generally inversely related to metabolic rate: the rat has a much shorter life span and much higher cancer rate (30% of rats get cancer by age 2) and a much higher metabolic rate than long-lived humans. Thus, we have been interested in why a decreased metabolic rate is associated with a decreased cancer rate and increased life span. We have become particularly interested in the role of oxygen radicals generated by normal metabolism as a major force leading to both aging and cancer.

Oxygen radicals have been shown to produce DNA base damage and strand breaks. Two products that are formed in DNA in vitro by chemical oxidation or ionizing radiation (an oxidative mutagen) are thymine glycol and hydroxymethyluracil, both oxidation products of thymine. Specific mammalian DNA repair systems are known to excise these lesions from DNA in vitro. Our laboratory has recently reported the identification, in both human and rat urine, of thymine glycol, thymidine glycol, and hydroxymethyluracil. We now have considerable evidence that these products are derived from the repair of oxidized DNA. The total output of these three compounds represents the formation of about 1,000 oxidized thymine residues per cell per day in man. Since these products are only three of a considerable number of types of oxidative DNA damage products described by radiobiologists, there are likely to be several thousand oxidative DNA hits per cell per day in man. Rats, which have a higher specific metabolic rate and a shorter lifespan, excrete about 15 times more thymine glycol, thymidine glycol, and hydroxymethyluracil per kilogram body weight. Preliminary results with mouse urine indicate that mice have even higher levels of these products than rats.

The continuing development of these techniques might lead to a major advance in biochemical epidemiology on people and also help in the investigation of antioxidants and other anticarcinogens which are present in our diet.

Measuring Oxidative Stress in Humans. Active species of oxygen have received much attention recently in connection with their pathological effects and possible contributions to cancer and aging. Lipids are one of the most oxidation-susceptible components of the human body. It is believed that the oxidation of lipids proceeds by a free radical chain mechanism and gives the mutagenic and carcinogenic lipid hydroperoxides as primary products.

Many toxic chemicals are active by this same mechanism. It would be very desirable in toxicology to detect the lipid hydroperoxides in tissues. There were no good methods that have enough sensitivity to be applied to biological samples and that can avoid the interference of antioxidants. We have developed a simple and sensitive method for identifying and characterizing lipid hydroperoxides in blood and tissues. Normal human blood contains the carcinogen and mutagen hydrogen peroxide as well as cholesterol ester hydroperoxides as do tissues of the rat. We are investigating the effect of a variety of toxic chemicals on producing these mutagenic substances in tissues.

Comparative DNA Studies. Our laboratory has been conducting comparative studies of human DNA, particularly mitochondrial DNA (abbreviated mtDNA--a small piece of DNA which is maternally inherited and which accumulates mutations more rapidly than does DNA found in the nucleus). These investigations help us to understand the types and incidences of genetic variants found around the world and may at the same time lead to identification of DNA structures most susceptible to environmental mutagens.

Recently we have been using a method which permits the amplification and subsequent sequencing of particular segments of DNA without cloning and without specific purification of mtDNA. Thus small samples of blood suffice as starting material, and many individuals can be rapidly screened. During the past year we have employed this method to examine a region of mtDNA in which length mutations had been detected. While most human mtDNAs have in this area two adjacent copies of a certain 9-base-pair sequence of DNA, our work revealed the deletion of one of these two copies in 12 mtDNAs as well as an addition of 4 base pairs in one mtDNA. Analysis of these and other data in an evolutionary context suggests that the deletion mutation occurred only once in the descent of modern human mtDNAs from a common ancestor and that this mutation originated in Asia.

The method described above has enormous potential and will ultimately permit assessment of mutations in any given segment of many hundreds of human genes. We are currently successfully using this approach also to study DNA surviving in paleobiological remains, including mummy tissue from Peru and a 40,000-year-old sample of mammoth muscle. Besides allowing us to address additional evolutionary questions, such investigations frequently permit us to identify the postmortem modifications undergone by DNA preserved for eons in diverse environments.

New York University Medical Center

A strong correlation between blood lead concentration and impairment of psychometric performance was found by Marmor et. al. in a study of 42 pairs of twins in which onoy one member of each pair had a history of lead poisoning. The comparison of twins in this study minimized the confounding influence of environmental variables other than lead, thus strengthening earlier evidence linking lead intoxication to adverse effects on intelligence.

An industry-wide epidemiological study by Pasternack et. al. of some 2500 chemical workers exposed occupationally to chloromethylmethyl ether and bis-chloromethyl ether confirmed that the risk of lung cancer in these workers increased with the intensity and duration of their exposure, being seven times higher in the most heavily exposed group than in the controls. The risk also persists for as long as 20 years after exposure, although somewhat diminished, suggesting that early as well as late stages of carcinogenesis are affected.

Respiratory function in normal teen-aged children at a summer camp was found by Lippmann et. al. to be impaired during periods of increased atmospheric concentration of ozone. Various pulmonary functions were decreased by 5-17% in the presence of 120 ppb ozone, the current national ambient air quality standard. Ozone would thus appear to exert toxic effects at lower concentrations than has been suspected heretofore.

DNA from human carotid artery atherosclerotic plaques was found by Penn et. al. to cause neoplastic transformation of cultured mouse embryo cells. This finding of an "oncogene" which is not present in normal arterial tissue supports the view that atherosclerotic plaques consist of tumor-like proliferations of smooth cells. The analogy between plaque formation and tumor formation, if further substantiated, will have far reaching implications for control of risk factors and other strategies for prevention .

Cancers produced in rats and mice by ionizing radiation or cancer-causing chemicals have been found by Garte et. al. to contain DNA which is carcinogenic on transplatation into normal cells. The specific "oncogens" present in the DNA differ, depending on the type of cancer, its site of origin, the carcinogenic agent causing it, and species affected. These differences point to the existence of multiple mechanisms of carcinogenesis the details of which remain to be elucidated.

The concentration of the naturally occurring radioactive gas radon in private homes and apartments in the Northeast has been found by Harley et. al. to vary with barometric pressure, temperature, humidity, rainfall, season, and other climatological and geological factors. These variations indicate the existence of a number of variables influencing exposure of the population to radon which must be considered in assessing associated risks and formulating protective strategies.

Bacteria from the gastrointestinal tract, sewage sludge, and river bottom sediment have been found by Young et. al. to convert a number of toxic organic chemicals into a useful end-product, methane, when grown under anaerobic conditions. This promising approach for disposing of toxic chemicals is being explored further, and efforts are being made to identify the responsible genes and metabolic pathways, in order to develop strains of bacteria with even greater detoxifying capabilities.

Vanderbilt University

Dr. Gettins is elucidating the role of the trace nutrient selenium in an enzyme called glutathione peroxidase. This enzyme is thought to be involved in the protection of cell membranes from damage by oxidants in the environment. The selenium is necessary for the function of the enzyme and may explain the nutritional need for selenium in the human diet. Dr. Meredith is continuing to investigate nutritional and other factors involved in the maintenance of balances of the cofactor glutathione in cells. Glutathione is an important compound, normally present at high levels in the body, which is used to detoxicate potentially dangerous chemicals which enter the body (and is also used by the glutathione peroxidase enzyme mentioned above). Dr. R. F. Burk, who also has considerable experience with enzymes that involve glutathione, has recently joined Vanderbilt as Chief of Gastroenterology and will strengthen this effort.

A highly efficient mechanism to repair radiation- or chemically- induced damage to DNA is necessary for a cell to preserve its genetic integrity. Either a failure to repair these damages or an inaccurate repair mechanism will result in mutations within DNA sequences, which in turn can be associated with direct mutagenesis and ultimately cancer. There appears to be a strong case for a causal relationship between defective repair of sunlight-induced damage and carcinogenesis in the human genetic disease xeroderma pigmetosum. Dr. Lloyd's research is designed to enhance the understanding of the DNA repair system which is normally responsible for the repair of UV damage to human cells. Significant progress has been made toward the cloning and identification of one of the genes which is directly associated with the initiation of DNA repair at sites of sunlight-induced damage in human cells.

Dr. Guengerich's laboratory has identified the proteins which are responsible for the clearance of several drugs from the human body. These proteins, termed cytochrome P-450 enzymes, do not properly function in some individuals and as a result drugs accumulate, leading to potentially dangerous side effects. Diagnostic antibodies and recombinant DNA probes have been developed and are being utilized to help identify individuals who may be suspect to certain drugs, including new agents still under development. His group is also interested in how these individuals, which show unusual activities towards drugs, may process cancer-causing chemicals in the environment.

Dr. Guengerich and Dr. Harris have identified how the pesticide ethylene dibromide, which iwas used to preserve grains, interacts with DNA and can lead to its cancer-causing effects. Dr. Harris has also studied how aflatoxin interacts with DNA and how the specificity of this chemical interaction may explain why this chemical, which is found in moldy corn and peanuts, is the most potent agent known to cause liver cancer. These studies on the interaction of chemicals with DNA have been aided greatly by new instrumental developments in the nuclear magnetic resonance laboratory at Vanderbilt. Another instrument laboratory involving mass spectrometry has enabled Dr. Blair to study the structure of proteins, to describe how a new drug is broken down in the body, and help establish pharmacological control mechanisms involved in platelet aggregation.

Dr. Field has studied a number of new compounds containing sulfur and phosphorus atoms -- some produce cancers and some have anti-cancer properties; one in particular (dithiooxamide S,S'-dioxide) has confirmed anti-leukemia activity. Several related compounds have good anti-radiation drug properties; they can protect 50 to 100% of mice from doses of ionizing radiation that otherwise would be lethal.

During the past year Dr. Jones' group has developed a procedure for the treatment of acute oral cadmium intoxication which is significantly better than any previously been reported. This procedure, developed in an animal model, is based on the timely administration of dimercaptosuccinic acid, and is effective in preventing lethality from cadmium, when instituted within three hours of ingestion. The treatment also leads to a very significant reduction of kidney and liver levels of cadmium in the treated animals. They also established the carcinogenicity of a nickel compound of a type widely used in analytical chemistry, whose carcinogenicity may be a property of many other nickel compounds whose behavior in this respect is currently unknown. After the untimely death of Dr. Hnilica, Dr. Briggs has also continued to study toxic and cancer-causing metals, particularly chromium and platinum. Platinum compounds are also extensively used to treat cancers and several studies have addressed the mechanism of this chemotherapy in hopes of improving its efficacy.

University of Rochester

Potential human health effects of acid rain may arise from either predepositional and post-depositional exposure. Drs. Mark Utell and Gunter Oberdoerster have made observations of acid aerosol effects on human lung function - constrictive effects in the airway were noted in asthmatic subjects and were also found in normal subjects if exposure took place after a period of exercise.

Post-deposition effects of acid rain may arise from mobilization of toxic metals into the human food chain. Methylmercury levels in fist have been reported to increase substantially in areas of acid deposition. The most recent finding in the Rochester follow-up studies of methylmercury poisoning outbreak in Iraq is that male infants are more sensitive than females. This finding agrees with animal studies performed by Drs. Sager, Rodier, Aschner, and Doherty at Rochester where neonatal male mice showed effects on brain development at lower doeses of methylmercury than female mice. A recent study by McGill University on Cree Indians living in an area of acid deposition in Quebec had found that male infants were more sensitive than females.

Work on other toxic metals is being pursued by our Behavioral Toxicology Program. Dr. Cory-Slechta has noted that treatment of animals with ethylenediamine tetraacetic acid (EDTA) increases brain levels of lead in experimental animals and may be associated with adverse effects on behavior. These findings raise questions about the current use of EDTA as a diagnostic test for children's exposure to lead.

A new and exciting method has been developed for a non-invasive in vivo measurement of manganese in the brain. The central nervous system is the target organ for manganese which produces signs and symptoms similar to Parkinsons disease. The application of magnetic resonance imaging is revealing striking pictures from the brain of non-human primates indicating concentrations of manganese in specific areas of the brain (the substantia nigra) where manganese is known to produce damage. This technique holds great promise for direct application to humans to assess manganese levels non-invasively in the target tissue.

Massachusetts Institute of Technology

At MIT, the NIEHS Center has taken a direction which may permit us to directly discover which chemicals in our environment are harming people.

Their approach has two parts. The first is to identify and measure the chemicals actually in human blood samples, bound to blood molecules such as hemoglobin. Without such direct methods, one must indirectly estimate what chemicals actually enter people from the environment and are changed in the body to more dangerous reactive chemicals. This new technology has already measured the presence and amount of cancer-causing aromatic amines in ordinary people. In the next year it should be extended to a wide variety of chemical classes. Knowledge of the reactive chemicals actually getting into people will give us a rational basis for setting priorities for further research.

The second part of the new approach is based on the demonstration at MIT that each chemical induces a characteristic pattern of genetic change in human white blood cells. In the past year MIT genetic toxicologists have developed means to make many accurate copies of a portion of the DNA in a blood sample and to separate normal DNA sequences from genetically changed ones. They hope this year that their techniques will let them see the genetic fingerprints of environmental chemicals on the blood cell genes of ordinary people.

Together, these technologies offer the startling promise of knowing if an individual person has been exposed to a particular chemical and if that exposure has resulted in a significant amount of genetic change in that person.

The MIT goals for the next five years extend to identifying chemicals of unknown structure in blood samples and tracking down those chemicals which cause the patterns of genetic change common to many individuals.

Oregon State University

The EHS Center is carrying out basic research in alternative animal models (rainbow trout and rats) which may clarify the influence of diet in man upon the development of, or the prevention of, cancer. Animals fed the purported inhibitors -naphthoflavone (BNF), polychlorinated biphenyls (PCB), and plant aglycone indole-3-carbinol (I3C) before and during exposure to a potent carcinogen, aflatoxin B_1, showed significantly lower incidences of liver cancer than would be expected. The way in which BNF inhibits AFB_1 carcinogenesis appears to be similar in these animal models, but all metabolic activities thought to be inhibited with several compounds could not be demonstrated. In other trout studies in embryos, the degree of carcinogencity seems to be dependent upon the route of carcinogen exposure as well as the timing of the inhibitor exposure.

As an alternative to animal studies, toxicity studies are being pursued through the use of cell culture. Two major difficulties arise in cultivation of uniform generations of cells: the occurrence of growth crising and the appearance of gross alterations in cell genetic material. At the OSU EHS Center, development of a different medium in which the cells grow, one free of calf serum, has allowed "infinite" growth of uniform mouse embryo cells. In these cell cultures, tumor promoter-like effects have been observed after exposure to environmentally significant halogenated dioxins.

The methods by which chemicals become toxic to biologic tissue are being studied with rat liver cells. The role of calcium ion, as involved in cell death after toxic chemical insult, and that of cellular vitamin E and glutathione are being studied. Vitamin E seems crucial for maintaining intracellular glutathione (a peptide which is utilized by some detoxifying enzymes and aids in protective action against chemical metabolites to help prevent loss of cell viability and cell death). The vitamin acts by maintaining glutathione precursor pools, i.e., the preceding compounds, and by enhancement of glutathione synthesis as well as having an important role in the maintenance of vital protein thiols.

Efforts to rigorously determine the size, composition, and subunit structure of the muscarinic receptor from pig heart atria in hydrodynamic studies were successful. (Receptors are specific cell proteins that bind various molecules, e.g., antigens, hormones, toxins, neurotransmitters.) In collaboration with investigators at Genentech, Inc., cDNA clones of the muscarinic receptor were obtained and sequenced. This allowed deduction of the amino acid sequence of the protein from the sequence of the DNA.

Substantially more elaborate statistical methods, which widen the focus over extended periods of time, have been applied to data on cancer risk due to radon exposure. Analyses on data relative to several groups of uranium workers exposed to radon will be extrapolated to possible risks of high levels of radon recently discovered in US homes located over certain types of geologic formations.

The Johns Hopkins University

Determinants and Indicators of Host Susceptibility

An animal model for the investigation of airflow-induced brochoconstriction has been developed. It allows us to dissect the pathways and mechanisms by which drying the airways produces bronchospastic responses. We found that low temperature is not the initiating stimulus for dry air induced constriction. Indeed, low temperature reduces responses produced by drying, presumably because of osmotic stimuli. Inasmuch as this model mimics exercise-induced asthma in man, it provides new leads into mechanisms of airways obstruction and interactions between environmental and host factors.

Levels of serum cholesterol and albumin have been shown to influence the partitioning of PCBs between serum and adipose tissue in humans. An equation has been developed to predict and control for this effect in studies of certain important, potentially toxic PCB congeners.

The role of polymorphonuclear leukocytes (PMS's) in activating chemical carcinogens has been described, thus linking the process of inflammation to chemical carcinogenesis.

Mixed Exposures

We have determined that carbon monoxide exposure potentiates noise-induced auditory loss in laboratory animals. The hearing loss is both greater in size and the frequencies most affected are shifted upward following co-administration of these two ototoxic agents. The basis for this potentiation may be a reduction in available oxygen in the inner ear resulting from a decreased blood flow produced by noise and impaired oxygen carrying capacity produced by carbon monoxide.

Aliphatic alcohols (isopropanol most potent in series) potentiates hepatotoxicity of carbon disulfide (CS_2) to an extent that toxicity is seen at doses of CS_2 calculated to be equal or lower than current TLV of 10 ppm, emphasizing importance of alcohol exposure to organic solvent toxicity.

Butylated hydroxy anisole (BHA) and butylated hydroxy toluene (BHT) are both widely used by the food industry as antioxidants. The latter, in high doses, results in pulmonary toxicity. BHA was shown to enhance the metabolic activation of BHT, resulting in a potentiation of BHT pulmonary toxicity.

Biologic Indicators of Exposure and Response

Residents in log homes have been shown to have measureable tissue levels of the wood treatment agent Pentachlorphenol (PCP). The level depends on the degree of wood treatment. We have determined the relationship between PCP in the wood of log homes, PCP levels in the air and on surfaces within the homes, and in the serum and urine of residents of these homes.

The development of a technique to detect DNA lesions induced by solar radiation in signal cells. This technology will allow us to evaluate the role of a specific DNA lesion in human skin cancers induced by exposure to sunlight.

Toxic Effects and Mechanisms

We have identified an endogenously produced convulsant in the brains of Vitamin B-6 deficient neonatal animals which may provide the chemical basis for the seizures observed in these animals and possibly other epileptic disorders.

A chemical component in cigarette smoke has been identified that generates the potent chemotaxin, leukotriene B_4, through its reaction with alveolar macrophages and neutrophils. This chemical component is likely to contribute to the recruitment of inflammatory cells to the cigarette smokers' lung and the resultant lung destruction observed in smokers.

Certain organophosphates have been observed to alter human blood monocyte membrane functions that are essential for the generation of an immune response. These data suggest that certain organophosphages, in general usage, may be immuno-suppressive.

Chemical Interventions

Ethanol blood levels and associated hepatotoxicity were markedly decreased by co-administration of quinone-containing molecules, thus confirming a novel hypothesis for control of metabolism and toxicity of ethanol.

The processes of both tumor promotion and tumor initiation have been under investigation. Novel antioxidants have been shown to prevent promotion, thus supporting a role of reactive oxygen species in this process. The mechanism of antioxidant protection against initiation, on the other hand, appears to be related to the ability of antioxidants to induce the levels of enzymes involved in the metabolic inactivation of carcinogens. Exploitation of both of these observations suggest novel ways to develop a chemoprotective strategy against chemical carcinogenesis.

The development and application of nonionic analogs of normal oligomers that are readily taken up by mammalian cells and are resistant to degradation by cellular nucleases. The analogs can be used as probes in a variety of scientific studies including their possible use as antiviral and anticancer therapeutic agents.

The Duke University Marine and Freshwater Biomedical Sciences Center

The Marine and Freshwater Biomedical Sciences Center of Duke University has been an integral part of the Marine Laboratory at Beaufort for the past eight years and has recently received notification of renewed funding for the next five years. Studies carried on by participants in the Center serve to increase our understanding of the toxic effects of metallic and organic pollutants. Some of these studies show how pollutants affect aquatic organisms, while others use aquatic organisms to determine the mechanisms whereby pollutants adversely affect human health.

The Center promotes and integrates multidisciplinary research on both the mechanisms and effects of environmental pollutants. Toxicologists, ecologists, oceanographers, chemists, biochemists, botanists and physiologists are brought into contact with one another and with engineers and clinicians through programs and activities of the Center. The Center thus provides a network for communication which would not otherwise be available. Elements of this communication network are workshops and seminars, a bimonthly newsletter, an annual report summarizing recent advances, and a visiting scholar program that brings researchers from around the world to the Marine Laboratory.

Much of the work of Center participants is focused on four basic questions:

1. What are the effects of organic and metallic pollutants -- alone and in combination

2. What mechanisms underly the adverse effects of pollutants on human health?

3. What protective mechanisms against toxicity are normally present, and what factors offset these?

4. How are toxic metals biologically bound, transported and accumulated?

In the following, recent progress along four distinct lines of investigation is summarized.

Degradation of Toxic Materials by Immobilized Enzymes

Toxic compounds have been present for all of recorded history. The remarkable versatility of living organisms has been demonstrated time after time in the ways survival has been achieved in the face of environmental stress -- either natural or man made. Studies underway at the Duke Marine Laboratory make clear how such natural protective strategies can be used to man's advantage.

Some of the most hazardous of environmental pollutants are those that interfere with transmission of neural signals. Representative of such compounds are the organophosphate insecticides and closely related chemicals developed as chemical warefare agents. In both cases, binding of organophosphates to acetylcholinesterase inhibits the function of this critical enzyme. Insecticides with short life-times for effective action are being developed, but it is still of concern that our ground waters and estuaries may be contaminated by active forms of these compounds.

Nature's own protective systems may provide us with tools to detoxify compounds such as the organophosphates. It has been shown that certain bacteria, after exposure to an insecticide, developed enzymes to metabolize the insecticide These bacteria can be readily cultured. Studies at the Duke Marine Laboratory demonstrated that modern techniques of cell and enzyme immobilization could be used to extend the natural life-time to the organophosphate-degrading enzyme and to allow the enzyme to be used repetitively.

The studies thus far conducted deal with a single type of cell culture and have addressed only the degradation of organophosphate compounds. The principles behind this work, however, extend to virtually any other class of detoxifying enzyme that can be immobilized without loss of activity.

Estuaries and Human Health

It is becoming more widely recognized that the nation's estuaries are a national resource, being the nurseries for crustaceans, shellfish, and finfish. Several of the participants of the Center are deeply involved in the preservation and protection of estuarine systems. Their studies, in large part, help us to understand the resilience of estuarine systems to man's perturbations of them. Data obtained can aid in predicting the probably response of an esturine system to such activities as nutrient overload, drainage of wetlands, insecticide runoff, metal input, and bacterial contamination via sewage disposal.

The problem of interpreting and properly analyzing the effects of mixed types of pollutants is no where more apparent than in studies of estuarine ecosystems. Good models for such analyses are readily available at the Marine Laboratory. Developing marine invertebrates have shown themselves to be exquisitely sensitive to both organic and metallic pollutants. Center particípatnts have reported that their laboratory studies with sub-lethal doses of mixed pollutants have in a number of cases shown dramatically increased lethality.

Human health is clearly involved in deliberations about the handing and protection of our estuaries. Research by participants in the Center may make it possible to better deal with problems where they occur and to prevent their occurrence in pristine estuarine systems.

Pollutant Interactions with Heme Proteins and Red Blood Cells

It is widely recognized that liver enzymes, such as cytochrome P450, are of physiological importance in detoxifying a number of environmental contaminants, or, in some cases, altering the contaminant to a more toxic form. Hemoglobin and myoglobin, although not liver enzymes, may play comparable roles under some conditions. This line of study is underway at the Marine Laboratory, with collaborative studies on the Duke campus in Durham that address the role of activated oxygen species in heme-catalyzed reactions.

Red blood cells and the hemoglobins they contain are normally involved in transporting oxygen from the environment to respiring tissues. However, exposure of red blood cells to pollutants can involve them in other types of reactions, some of which may be injurious to the organisms in which they occur. It has been shown that red blood cells can cause biotransformations of many industrial chemicals, dyes, and even medicines. Adverse human health effects which result from these reactions are under study.

At the present time, researchers are attempting to determine if pollutant-induced damage to red blood cells is linked to levels of production of "activated" species of oxygen. "Activated" oxygen species, which can damage cell membranes and cell contents, may be generated as a consequence of pollutant interactions with hemoglobin.

Delayed Neural Toxicity

The Duke University integrated Toxicology Program has many goals and objectives in common with the Center, and a number of Duke faculty are participants in both. Though such cooperative efforts has come about a study of how a sea-worm, Myxicola, can be used as a model in studying a significant human health problem, that of delayed neural toxicity.

Delayed neural toxicity can result from exposure to a group of environmental toxicants which eventually result in a degeneration of axons within both the peripheral and central nervous system. These toxicants include hexane, a component of many petroleum products and a common glue solvent. Hexane has been implicated in human neuropathies, both from exposure in the workplace and as a result of inhalant drug abuse.

It has now been hypothesized that hexane is metabolized by the liver into a more toxic compound that then crosslinks many proteins in the human body. When this crosslinking occurs in nerve tissues, the changes do not become immediately apparent, but lead to a delayed neuropathy. Studies with the sea worm, Myxicola, have provided support for this hypothesis.

Studies with Myxicola are more readily interpreted than are comparable studies with mammalian subjects. The nervous system of the worm is much simpler, and administration of the toxicant is completely straight forward. The whole worm can be immersed in hexane-laden sea-water, something impossible with a rat!

The neurofibril cross-linking observed with hexane-treated Myxicola supports the hypothesis that cross-linking effects may be intimately involved with delayed neural damage. The potential applications of this are multiple. The kind of neurological problems encountered with hexane are also seen after exposure to a number of other common toxicants to which humans may frequently be exposed. Better understanding of the basic mechanism underlying this kind of toxicant action will make it easier to know how to handle these materials at home and in the work place.

University of Washington Marine/Freshwater Biomedical Center

During the past year the Marine Freshwater Biomedical Center at the University of Washington has increasingly invested effort and money into developing research on Liver Cell Carcinogenesis in English Sole. It is now well established that Sole caught in polluted urban areas of Puget Sound have a high incidence of several liver lesions including pre-neoplasms and cancers. English Sole caught in cleaner waters of more distant areas of Puget Sound seldom have these liver lesions.

Our research program seeks to relate this naturally occurring carcinogenic process as a model for human neoplasia. there is some evidence that pollutants sucha as aromatic hydrocarbons, organic chemicals or trace metals which have increased in the polluted waters and sediment may be the cause. Our Center has facilitated the development of a group of scientists to attack several aspects of this problem. One group is identifying the effects some of the polluting on the chemical makeup (free radicals) of the liver cells and another group is studying the changes in the surface glycolipids of the liver cells as they become preneoplastic andneoplastic. Others are studying the cytogenetic changes, the life cycle habits and nutrition (exposure) or defining the precise pattern of evolution of the phenotypic changes and enzyme changes.

Oregon State University Marine Freshwater Biomedical Center

Environmental toxins are being tested for cancer-causing ability in rainbow trout. Studies during 1985-1986 have confirmed that as little as 10 nanograms of some suspect carcinogens, when injected directly into fertilized trout eggs, will cause cancer to appear in trout liver, stomach, and/or kidney nine months later. This represents a major advance which makes it possible to conduct full vertebrate cancer testing for suspect compounds too rare to test in conventional rodent bioassays. Appropriate studies are underway to full characterize mechanisms (biochemical, genetic, cellular) and pathological consequences of cancer induction in this model, in comparison with mammalian systems.

Mt. Desert Island Biological Laboratory/Center for Membrane Toxicity Studies

Investigations during our first year of funding involved a multifaceted approach to the study of the effects of heavy metals (and other toxicants of interest) on various aspects of membrane transport. Reports are not in from all research groups, but the following may be of some interest:

Dr. David H. Evans (University of Florida) found that the gill vasculature of the shark pup is extremely sensitive to cadmium, with significant vasoconstriction produced at concentrations (on serosal side) as low as 0.1 uM (11 ppb). Since the gill vasculature is thought to be the homologue of the mammalian coronary arteries, and Cd has been implicated in addition, he found that higher doses of Cd (0.1 mM, 11 pppm) applied to either the serosal or mucosal surface significantly inhibited the flux of ammonia across this epithelium. Since heavy metals have well-documented renal effects, and the mammalian kidney tubule transports ammonia, these findings are also of some relevance.

Dr. Arnost Kleinzeller (University of Pennsylvania) found that the relatively membrane-impermeant mercurial PCMBS (1 mM) produces significant cellular swelling of slices from shark rectal gland by increasing membrane cationic activated ATPase. Since the rectal gland is a model system for the ionic transport mechanisms of the mammalian thick ascending limb of the loop of Henle, which is very important in the production of concentrated urine, these findings may indicate a mode of action of the known diuretic effects of mercurials.

Dr. Leon Goldstein (Brown University) demonstrated that addition of 0.1 mM (20 ppm) mercuric chloride to the mucosal surface of the flounder intestine markedly inhaibits uptake of the amino acid tyrosine. Since the heavy metal was not inhibitory when applied to the serosal side of the epithelium it is apparent that the inhibitory effect is mediated via direct interaction with the Na-amino acid cotransport system, rather than Na + K activated ATPase. The organic mercurial, PCMBS, was also inhibitory, but at 10-fold higher concentrations. He also investigated the effects of various arsenicals (found in herbicides, pesticides, and chemotherapeutic agents) and found that 0.25 mM oxopheylarsine (added to either the mucosal or serosal surface) inhibited tyrosine transport significantly, while 0.1 arsenamide was not inhibitory. Interestingly, neither 1.0 mM cadmium chloride not 1.0 mM lead nitrate inhibited tyrosine transport across the founder gut. Since heavy metals are known to produce aminoaciduria, and the flounder gut models the amino acid uptake mechanisms found in the rpoximal tubule of the mammalian nephron, these studies are of some interest.

Drs. Rolf Kinne and Evamarie Kinne-Saffran (Max-Planck-Institut fuer Systemphysiologie, Dortmund, FRG) utilized isolated membrane vesicles from the proximal tubule of the flounder kidney to investigate the effects of cadmium on the uptake of L-alanine. They found that 0.1 mM $CdCl_2$ (11 ppm) significantly inhibited this Na-dependent uptake, only after a 30 minute pre-incubation of the vesicles with cadmium. Cd did not inhibit the sodium-D-glucose cotransport system, rather than by inhaibition of the Na + K activated ATPase, which provides the driving force for both amino acid and sugar cotransport system. Like Dr. Goldstein's group, these findings have direct relevance to the aminoaciduria produced by heavy metals in mammals. This group also investigated the effects of cadmium on the transport properties of vesicles isolated from the shark rectal gland (a model system for the thick ascending limb of the mammalian loop of Henle). They found that the major effect was a concentration-dependent inhibition of Na + K activated ATPase (apparent K_1 of 5 x 10^{-7} M).

Drs. Patricio Silva, Seymour Rosen, and Franklin Epstein (Harvard University) and Richard Solomon (New York Medical College) have used the perfused shark rectal gland (model of mammalian, thick ascending loop of Henle) to investigate the effects of the antineoplastic drug cis-dichlorodiammine platinum (cis-platinum) and bis (tributyltin)oxide (TBTO), which is used in antifoulant marine paint, on membrane transport. (Other organotins are used as PVC plastic stabilizers, catalysts for silicone rubber, and biocides.) Addition of cis-platinum at concentrations up to 10^{-4} M had no effect on the secretion of fluid by the rectal gland. Addition of relatively low concentrations of TBTO (10^{-7} to $^{-6}$ M) also had no effect on gland secretion, but use of higher concentrations (5 x 10^{-6} M and 10^{-5} M) irreversibly inhibited secretion. Subsequent experimentts indicated that quite low concentrations of TBTO (10^{-11} M and 10^{-10} M) inhibited the stimulation normally produced by atriopeptin, but had no effect on the stimulatory efficacy of vasoactive intestinal peptide. Since VIP is thought to stimulate the chloride secretory cells of the rectal gland directly, while AP is considered to be stimulatory on neuronal cells within the gland, it appears that environmentally relevant concentrations of TBTO are neurotoxic. However, concurrent experiments examining the effects of TBTO on oxygen consumption, Na + K -activitated ATPase, and oligomycin-sensitive proton ATPase indicated that similarily low concentrations of the toxicant (10^{-10} to $^{-9}$ M) inhibited basal oxygen consumption of rectal gland slices, and both ATPases, indicating rather general cytotoxicity.

Drs. James Boyer and Ned Ballatori (Yale University) used cannulated, free-swimming skates to investigate the rate limiting steps in the bilary excretion of methymercury, since excretion of this compound by marine species is known to display extremely long half-lives, leading to retention and bioconcentration in the food chain and potential hazard to humans. They found that the slow excretion was secondary to the unusally low rate of bile formation, rather than impaired hepatic uptake.

Dr. David Dawson (University of Michigan) investigated the effects of inorganic mercury on K transport across the urinary bladder of the flounder. He found that Hg was a potent, reversible blocker of apical K channels, with a K_1 of less than 1 uM (200 ppb). Partial blockade could be produced with a little as 0.2 uM (20 ppb), but use of high concentrations (5 to 10 uM) produced relatively nonspecific increases in apical membrane ion permeability. Barium, has often been used as a indicator blocker of K channels and its K_1 is 50 uM, so it is clear that Hg is a very specific K channel blocker. The Hg blockade is reversible with simple washing with Hg-free Ringer's solution. Time-course experiments indicated that the Hg blockade of K channels was also spontaneously reversible, even without washing. This spontaneous inactivation could be avoided by either perfusing tissues with Ringer's containing $HgCl_2$ or replacing aliquots of the experimental solution with fresh solution. In both cases, the Hg-induced blockade was constant, without any spontaneous recovery. However, subsequent washing with Hg-free solutions reversed inhibition. These data indicate that Hg is a very potent, reversible K-channel blocker in the flounder urinary bladder. The fact that the effect can be abolished with simple washing indicates that the blockade may be produced by the ion entering the channel and occluding the pore, without any initial ionic interaction. However, the spontaneous reversibility indicates that secondary complexation probably takes place. Since the flounder urinary bladder is an excellent model system for K transport in the mammalian distal renal tubules it is clear that these studies are of some general interest.

Dr. Ian Callard (Boston University) used isolated skate liver cells to investigate the effects of cadmium on protein synthesis. Using a 90 minute incubation period, he could find no effect of cadmium (10^{-10} to $^{-3}$ M) on incorporation of tritiated leucine into a TCA-precipitable protein. The lack of a measureable effect may have been secondary to the short incubation time in the presence of the heavy metal.

Dr. Robert Preston (Illinois State University) investigated the effects of heavy metals on amino acid transport by the red blood cells of the marine polychaete worm, Glycera dibranchiata. These red blood cells are capable of maintaining gradients of the amino acid taurine of 850 to 1 (intracellular vs. extracellular) because this compound is used in volume regulation. Taurine has also been implicated in volume regulation by mammalian heart and brain cells. He found that the uptake of taurine by the cells was dependent upon extracellular Na and Cl and was highly specific for beta-amino acids. Incubation of cells with either 1 mM $CdCl_2$ or $Pb(NO_3)_2$ for 60 minutes did not alter ^{14}C-taurine uptake. However, incubation with 1mM $HgCl_2$ inhibited taurine uptake by 95% within 1 minute of exposure. Subsequent experiments determined that the K_1 of Hg inhibition was only approximately 20 uM. In addition, kinetic studies demonstrated that the effect of Hg was primarily on J_{max} (1/16th of controls), but K_m was also reduced (1/4th of controls), and treatment with 10 mM DTT readily reversed these changes. The reduced K_m in the presence of Hg indicates that the heavy metal had apparently increased the affinity of the taurine for its transporter, and the effect of DTT indicates that the Hg effects are via interactions with membrane -SH groups. Since heavy metals are known to produce aminoaciduria in mammals, these findings have great general interest.

University of Wisconsin Freshwater Biomedical Research Center

Mutagens and Luminous Bacteria

The luminous bacterial species, Photobacterium leiognathi, shows marked and easily measured responses to genotoxic agents. Carcinogens and genotoxic agents stimulate bioluminescence in some dark mutants of P. leiognathi. However, in contrast to other systems that respond to DNA-active compounds, the effect on bioluminescence is reversible; if the genotoxins are removed, the bioluminescence returns to low levels. These dark variants thus serve as model systems for the investigation of the mode of action of genotoxic compounds. This study is achieving advances in understanding basic mechanisms by which genotoxic compounds cause their cellular responses. Since control of luminescence is exerted at several levels by a variety of mechanisms, it should be relatively easy, using the wild type luminous bacteria and specific dark mutants, to specify the level and kind of interactions produced by various classes of genotoxic compounds.

Octopus Photoreceptors

Rhodopsin is a light sensitive membrane glycoprotein in the photoreceptor membranes in the retina, which triggers black-and-white vision after absorption of a photon. Rhodopsin is immobilized within invertebrate photoreceptor membranes, while it is very fluid in vertebrate membranes. The overall goal of the research is to understand the mechanisms of rhodopsin immobilization in octopus photoreceptor membranes and to study the effects on non-ionizing radiation and oxidative stress on photoreceptor membranes of octopus and bovine using association state of rhodopsin as a sensitive measure of membrane damage. The choice of the octopus rhodopsin as an object for study rests on the following:

1. The studies are more simple in their system because both the rhodopsin and light dependent channels are located in the same membrane.

2. The end product of photolysis of rhodopsin in invertebrates, metarhodopsin, is stable at physiological temperatures.

3. Uniquely in the octopus, metarhodoposin can be almost quantitatively photoregenerated by visible light.

4. Octopus photoreceptors can be prepared in large quantities.

The thrusts for this study are three-fold: (1) To understand the difference in mobility of rhodopsin in vertebrate and invertebrate photoreceptor membranes. (2) To serve as an interesting system to study protein association and interaction in membranes which are found in almost every facet of membrane functions and their regulations. (3) To study effects on non-ionizing radiation and oxidative stress on photoreceptor membranes to understand the mechanisms by which disease states of photoreceptor membranes are induced with these environmental factors. To date two procedures have been perfected: 1) purification of octopus rhodopsin from octopus photoreceptor membranes, and 2) reconstitution of membranes with phosphatidylcholine and cholesterol at various ratios. Biochemical characterization of these membranes is now underway.

TCDD Effects in Fish

The effect of 2,3,7,8,-tetrachlorodibenzene-p-dioxin (TCDD) in various tissues and organs plus overall growth and mortality has been investigated for several years using fish as a model system. Among the deliterious effects observed were abnormal liver cell development, loss of lymphoid tissue in the spleen and thymus and skin lesions. This latter symptom of TCDD toxicity may have a similar basis as chloracne, an effect of TCDD poisoning seen in humans. TCDD concentrations were highest in the fatty layers near the abdomen, but also found in the kidney, gill, liver, skin, heart and skeletal muscle. Mortality at 4 weeks was 95%.

It was also discovered that, in addition to the assimilation of TCDD directly from the water, accumulation can occur via dietary intake. Metabolic by-products are rapidly eliminated from the body, although only a small proportion of the TCDD is broken down chemically.

Cadmium in Euglena

. The alga, Euglena gracilis, grown in a completely defined culture medium has been used for more than 20 years as an eucaryotic model for mammalian metal metabolism. Recently, we have turned our attention to the effects of the toxic heavy metal, cadmium, on the growth and morphology of the alga, as well as its antagonistic effects with other essential metals, e.g. zinc. because of the importance in studying the effects of this environmental contaminant and because of the cellular basis for the toxicity observed, unicellular algae became useful models. Various schemata have been developed to account for the cellular metabolism of cadmium. Our work is putting the pieces together to confirm or modify these hypotheses. By concentrating on the abilities of proteins to bind cadmium and the overall structure of the protein, we are discovering the cellular basis for detoxifying metal contaminants and how cells normally metabolize essential metals, such as zinc.

STATEMENT OF PATIENCE WHITE, M.D., ARTHRITIS FOUNDATION

Senator PROXMIRE. Our next witness is Dr. Patience White, representing the Arthritis Foundation.

Dr. White.

Dr. WHITE. Thank you.

Senator PROXMIRE. It's good to have you here.

Dr. WHITE. Mr. Chairman, members of the subcomittee, I am Dr. Patience White. Today I have the proud privilege of representing the Arthritis Foundation, a national volunteer health organization concerned with the research, education, and patient care of 38 million Americans who suffer with arthritis.

I am a physician, and I care mainly for children with arthritis, and I direct the arthritis centers at Children's Hospital National Medical Center and George Washington University here, in Washington, DC.

The theme of my testimony is that the Arthritis Foundation and the scientific community believe it is imperative for this Nation to assign a high priority to biomedical research.

Research funds awarded by the NIH in the field of arthritis in the past 10 years have certainly been well spent. I will give you some examples.

The first would be Lyme arthritis. This was a type of arthritis that was felt to be totally debilitating and incurable, and cetainly it has now been elucidated that, by a tick bite, it is caused by this tick bite, and, as a result, you can cure it by antibiotics.

The person who can speak to this the most is certainly the former Member of the House of Representatives, Mr. Berkeley Bedell. He had this form of arthritis that caused him to step down from his political career. He received treatment and now is completely cured, and, I gather, is getting back into the political arena.

Another area where there has been great stride is that we are now capable to identify those who are susceptible to get some forms of arthritis. This is tremendously exciting because we will be able certainly to look into prevention.

Finally, in the past 2 years, there has been a new neurotransmitter elucidated that will help in elucidating pathways of inflammation. So we can certainly look into the causes.

Now we have to keep this initiative going. Certainly investigators need to be trained, and they need to be supported.

The United States and certainly the National Institutes of Health are leaders in the field. I would like to keep them in this preeminent position.

So, the Arthritis Foundation and the ad hoc group for medical research recommend a funding level of $7.452 billion for the fiscal year 1988. This will allow an award rate for types of research grants put forward at 38 percent, and they hope that it would increase by 1992 to 50 percent.

This is returning to the levels that we had in the 1970's.

Also, the Arthritis Foundation would like to suggest increased funding to the new Institute, the new Institute that was formed by the National Institutes of Arthritis, Muscoloskeletal and Skin Diseases. We would like to suggest increasing it up to $196 million, allowing the award rate in this area to go from 24 percent to 40 percent, bringing it up to the award rate of other Institutes.

Funding should not be frozen. It should certainly be hopefully increased more than the rate of inflation.

Knowledge is increasing faster than inflation. Research provides the best hope for reducing the staggering costs of arthritis to this country.

We urge Congress to approve the increased funding for the National Institutes of Health and for the National Institutes of Arthritis, Muscoloskeletal Diseases and Skin Diseases.

Thank you very much.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very much, Dr. White. We very much appreciate your testimony.

STATEMENT OF PATIENCE WHITE

Mr. Chairman and Members of the Subcommittee, I am Patience White, M.D., and I represent the Arthritis Foundation, a national voluntary health organization concerned with research, education, and patient care relating to 38 million Americans with arthritis. I am a physician specializing in pediatric rheumatology. I direct the arthritis center at Children's Hospital here in Washington.

OVERALL NIH FUNDING

The Arthritis Foundation strongly endorses both the conceptual framework and the funding levels developed by the Ad Hoc Group for Medical Research Funding. We believe it is imperative for this nation to assign a very high priority---and a concomitant financial commitment---to biomedical research. As the Members of this Committee know this is a time for potentially dramatic results and long-term gains in our search for disease cures, and prevention, and treatment. The solid research base generated through the National Institutes of Health is bringing accelerating dividends for America's health. But we must not let the momentum slow. It is an inescapable fact that good research is expensive. As research becomes more sophisticated and precise, costs increase greatly. The Arthritis Foundation believes the results are well worth the price. The Ad Hoc Group is recommending FY 1988 funding at a level of $7.452 billion, with an award rate for research project grants of 38 percent. The strategy identified by the Ad Hoc Group as sound policy is to bring the award rate to 50 percent by FY 1992, a level that has not been achieved since the early to mid 1970s.

FUNDING FOR THE ARTHRITIS INSTITUTE

The separation of the arthritis, musculoskeletal and skin programs that accompanied the establishment of the National Institute of Arthritis and Musculoskeletal and Skin Diseases dramatically highlighted a fact of which those in the field have long been aware: a very high level of research competency exists in rheumatologic research. Relative to all other NIH institutes, this one appears to have the greatest potential for successful research, undertaken by highly able scientists. This positive fact turns to a severe negative, however, when one considers the current research project grant award rates in NIAMS is the lowest of any research institute in NIH: 24%. For this reason a greater percentage increase in appropriations is required to bring NIAMS in line with the overall award rate for NIH.

The NIAMS Coalition, comprised of some 30 voluntary and professional organizations, urges an appropriation of $196 million for the National Institute of Arthritis and Musculoskeletal and Skin Diseases for FY 1988. The Arthritis Foundation endorses the Coalition's recommendation. It is consistent with the overall NIH funding level supported by the Ad Hod Group for Medical Research Funding and the Delegation for Basic Biomedical research.

With an appropriation of $196 million, NIAMS would be able to fund approximately 40% of study section approved research grants. The nine Specialized Centers of Research funded in FY 1987 would be continued. Six new core centers in skin disease research would be established.

The chronic limitation on research scientist training is of deep and continuing concern to all biomedical researchers, to professional groups, and to voluntary health organizations such as the Arthritis Foundation. If this nation is to have a research capability in the future, it must train future researchers in adequate numbers, as well as providing research opportunities for current investigators. The Coalition and the Foundation urge an increase in the number of career scientist awards, and also in research training.

For some ten years the Arthritis Foundation has urged the collection and analysis of epidemiologic data on arthritis. Such studies are long overdue, and will assist scientists in ascertaining the etiologic basis of disease, whether environmental or hereditary. There is also a great need for clinical trials in arthritis and other diseases and conditions with respect to which research is supported through NIAMS.

The intramural research capacity of NIAMS must be substantially strengthened. In-house research complements and enhances the extramural program, and often provides the basis for new discoveries and advancement of knowledge, through multidisciplinary investigation in immunology, biochemistry, molecular biology, and genetics.

ARTHRITIS RESEARCH ADVANCES

The National Institute of Arthritis and Musculoskeletal and Skin Diseases supports basic and clinical research affecting many of the most debilitating and serious diseases, through a variety of scientific disciplines. There are more than 100 forms of arthritis. Of these, a relative few have received substantial research attention because of the inadequacy of funding. With respect to rheumatoid arthritis, osteoarthritis, systemic lupus erythematosus, scleroderma, ankylosing spondylitis, and gout, among others, recent research has brought forth dramatic and important results.

Advances in molecular genetics have permitted the identification of genetic markers for high risk or susceptibility to rheumatoid arthritis, lupus, and the spondyloarthropathies, for example. Scientists have isolated a parvovirus, designated RA-1, which is present in the synovial tissues of most rheumatoid arthritis patients. Substance P, a peptide neurotransmitter, produces joint inflammation in animal models, and newly developed knowledge implicates the nervous system in severe joint injury. Research suggests that chemical blockers may reduce the severity of inflammation, and hence injury to the joint.

Major progress over the past few years has extended the life span of patients with lupus. Nearly 90 percent now survive ten years after diagnosis, compared with 50 percent in 1970. A recent advance in lupus research has identified a portion of a monoclonal antibody - 3I - which is highly specific to lupus, permitting better and earlier diagnosis and identifying genetic susceptibility to the disease. In osteoarthritis, progress is reported in isolating proteoglycan components associated with active osteoarthritis disease. Other studies have linked obesity with osteoarthritis in the knee joint. Many other important research efforts are underway in the muscle, bone and skin fields, from osteoporosis to epidermolysis bullosa. In all these fields of research supported through NIAMS there exist the prospects for exponential understanding of the etiologies, improved treatment, prevention, and disease cures.

CONCLUSION

Congress must understand how vitally important it is now to expand the research supported by NIH generally, and NIAMS in particular. Funding must not be frozen, nor limited to increases reflecting the rate of inflation. As one distinguished scientist puts it, knowledge is increasing faster than inflation. But knowledge can increase only if financial support is available to foster its development.

The Arthritis Foundation submits that the strong support of biomedical research, and the building of knowledge resulting from that research, is one of the very best investments this nation can make. Right now, support for NIH has made American biomedical research preeminent in the world. We urge Congress to insure the continuation of this preeminence by funding NIH and NIAMS at the levels we recommend.

STATEMENT OF STANLEY N. GRAVEN, M.D., MARCH OF DIMES BIRTH DEFECTS FOUNDATION

Senator PROXMIRE. Our next witness is Dr. Stanley Graven, representing the March of Dimes Birth Defects Foundation.

Dr. Graven.

Dr. GRAVEN. Thank you, Senator Proxmire.

I am Dr. Graven, professor of public health and maternal and child health, pediatrics, University of South Florida, and for 12 years at the University of Wisconsin, responsible for the Wisconsin Prenatal Program.

Senator PROXMIRE. No wonder you are so distinguished looking.

Dr. GRAVEN. The March of Dimes is concerned with at least four areas of the Federal health budget that pertain particularly to mothers and children. The Medicaid expansion, the maternal and child health block grant, the research budget for the National Institutes of Health and the Childhood Immunization Program, all very important issues to all of us.

These programs are vital to the health of our mothers and babies, and for the prevention of birth defects and particularly with their focus on low birth weight infants and all of the problems which they cause.

These programs are now good investments in the primary prevention, and it is very clear that the multiplying effect of not providing for them is becoming increasingly expensive for us as a nation.

The prenatal care and childhood care, as provided through the expanded Medicaid option and the MCH block grant have clearly been established as cost effective. The ratios are 1 to 4, 1 to 6, and some as high as 1 to 8 in terms of the benefit of spending the money on the primary care.

The March of Dimes urges full funding for the MCH at the level of the $557 million for fiscal year 1988, and the March of Dimes and all of us involved in prenatal care thank the committee and the Senate for their support for the supplemental appropriation for title V for this year.

The March of Dimes also commends the Congress for enacting the SOBRA Medicaid option last year.

The National Institutes of Health and the NICHD have been vitally important in research leading to breakthroughs in a number of problems associated with the health of children. The National Institute of Child Health and Human Development has made remarkable achievements, particularly in low birth weight, mental retardation, learning disabilities, and many of the metabolic diseases of children.

The March of Dimes supports an appropriation of $7.45 billion for the National Institutes of Health and the $497 million for the NICHD.

We strongly urge the strong support for this research. While much money is being spent on people who either have incurable illnesses or who are in the twilight of their lives, we have to urge the Congress to be able to support children at the beginning, or we won't be able to support any of us in our twilight years.

My last comment is the Childhood Immunization Program, in which, in some States, children are doing fairly well, but in many States, they certainly are not. The immunization investment is a good one, and that ratio is clearly at least 1 to 10 or 1 to 20. Vaccine preventable illnesses really should not be occurring in the United States today.

We still have the figures that one in four children in the United States are not immunized.

Senator PROXMIRE. One in four are what?

Dr. GRAVEN. They are not immunized. Twenty-five percent do not have any of the basic immunizations necessary.

The cost of immunization, however, in the last 7 years has risen from about $5 for a complete immunization for a child, to more than $30. This multiplication in the cost of immunization has forced many States to cut back on the number of children they can cover, particularly those who rely on public funds for their coverage.

I would have to urge this committee and the Congress to enact the full funding for the immunization program.

There is $115 million in the budget, and I would strongly urge that that be supported.

PREPARED STATEMENT

We would, then, urge very strongly that the support for the NICHD and the NIH be maintained, the MCH block grant be funded at its full amounts, and that the immunization for children, particularly those who require public support, be fully enacted.

I thank you.

[The statement follows:]

Statement of Stanley N. Graven

Mr. Chairman and members of the committee, I am Dr. Stanley Graven, professor of pediatrics and chairman of the department of community and family health at the University of South Florida. I have spent almost 30 years in the field of newborn health and have served as an advisor for public health programs ranging from the local to the international level.

Thank you for the opportunity to express my views, and those of the March of Dimes Birth Defects Foundation, on the importance of preventive health care programs to the lives and health of our nation's children. The March of Dimes has been dedicated to preventing birth defects, our nation's number one child health problem, for almost 30 years, through its programs of research, education and health services.

The March of Dimes is especially concerned with four areas of the federal health budget: Medicaid expansion, the Maternal and Child Health Block Grant, the research budget of the National Institutes of Health, and the Childhood Immunization Program.

None of these programs provide funds to the March of Dimes. The March of Dimes interest is based solely on the belief that funding for these programs is vital to the health of mothers and their babies, and to the prevention of birth defects and low birthweight.

We appreciate the need to reduce the federal deficit. However, we believe that failure to invest in basic health care, medical research and immunizations will cost us much more in the long run. It will cost us in human terms of lost lives and disabled children. It will cost us in terms of more money spent on long-term health care and crisis intervention.

The wiser, more cost-effective course is primary prevention. I hope my testimony will convince you that the budget areas we are discussing today are investments in prevention -- investments that will save lives, save money and protect the health of our nation.

MATERNAL AND CHILD HEALTH BLOCK GRANT

Among the most cost-effective programs funded by this government are prenatal care and childhood health care such as are provided by the newly expanded Medicaid option and the Maternal and Child Health Block

Grant. The Institute of Medicine of the National Academy of Sciences has estimated that for every dollar spent on prenatal care more than three dollars can be saved during the first year of an infant's life alone. Over the child's lifetime, the return on our investment in prenatal care may be much higher. Department of Health officials in Colorado, for example, estimate that eleven dollars would be saved for every dollar the state spends on prenatal care.

Last year the Senate Finance Committee recognized the value of the Maternal and Child Health Block Grant by increasing its authorizing levels by an additional $75 million. Those additional monies effectively acknowledge that the MCH Block Grant is the only health program devoted exclusively to the needs of mothers and children. A fully funded MCH Block Grant at $557 million, when combined with the expanded Medicaid eligibility for low-income infants and pregnant women, will provide a package of prenatal and preventive health care that can improve the health of hundreds of thousands of women and children.

The March of Dimes commends Congress for its sensitivity to the importance of prenatal care for low-income women. The SOBRA Medicaid option that you enacted last year was an important first step toward ensuring proper medical care during pregnancy for those who cannot afford it. At the state level, the March of Dimes is encouraging all states to take full advantage of the new Medicaid option and three states -- Arkansas, Mississippi and Tennessee -- have already done so.

NATIONAL INSTITUTES OF HEALTH

The March of Dimes also is concerned with federal support for research by the National Institutes of Health and in particular the National Institute of Child Health and Human Development.

As we all know, the vaccines and treatments that save thousands of lives and millions of dollars don't just happen -- usually they are the product of many years of research. The March of Dimes has funded important scientific and medical research for nearly 50 years, but the March of Dimes can't do it alone. The federal government has a crucial role to play in the funding of basic medical research through the institutes at NIH. NICHD is one such institute and has among its highest priorities exploring the causes of low birthweight, mental retardation, learning disabilities and birth defects.

The NICHD has made remarkable achievements in its short existence:

- Scientists supported by both NICHD and the March of Dimes have developed a very promising technique for saving premature infants from Respiratory Distress Syndrome, a disorder that affects some 40,000 babies each year.
- Scientists at an NICHD-supported Mental Retardation Research Center have identified the gene responsible for Duchenne muscular dystrophy, a disease that affects and ultimately kills one in 3,500 boys born each year. Now that the gene has been identified, scientists can begin working to develop an effective treatment and possibly a cure.
- NICHD researchers have developed a successful treatment for the rare genetic disease, cystinosis, which destroys the kidneys of about 200 children each year.

These successes represent just a few of the many areas in which NICHD-supported researchers are involved. NICHD is also investigating the causes of dyslexia, sudden infant death syndrome, and the transmission of the AIDS virus. These efforts may also lead to new, lifesaving breakthroughs.

The March of Dimes is concerned that insufficient funding for NIH will stall the progress that has been made in recent years in combatting birth defects. Preventing birth defects is a staggeringly complex task that requires pioneering research and coordinated public health efforts. Therefore, support for the research programs of NIH and NICHD is crucial.

The March of Dimes asks you to appropriate $7.45 billion for the National Institutes of Health and to appropriate $497.03 million to the National Institute of Child Health and Human Development. The latter figure includes funds for future year commitments to complete project grants awarded in fiscal 88.

CHILDHOOD IMMUNIZATION

Childhood immunization programs represent a third opportunity for this country to invest in primary prevention.

Many of you may recall the time before the discoveries of vaccines against polio, measles and rubella. Healthy children were suddenly crippled or dead. Babies were born blind, deaf or mentally retarded.

The Salk vaccine, developed in 1955 with March of Dimes funding, virtually wiped out polio. Since the late 1960s when vaccines were developed against rubella and the measles, it is estimated that public immunization has spared more than 40,000 children from birth defects caused by rubella and prevented the need for lifelong care. Another 20,000 children have been saved from miscarriage or stillbirth resulting from rubella. For every dollar we invest in vaccinations against polio, rubella and measles, this country saves between 10 and 23 dollars.

Unfortunately, the cost of many vaccines has multiplied in recent years. To fully immunize a child in 1980 cost $4.92. By 1986, this cost had risen to $31.31. The Centers for Disease Control estimates that one out of four pre-school age children in this country is not fully immunized against the major childhood diseases.

Last year, New York experienced an outbreak of rubella and congenital rubella syndrome — the birth defects that result when a woman contracts rubella during pregnancy. Nine states experienced severe outbreaks of measles. Between 1985 and 1986, the number of children who caught measles doubled, reaching levels not seen in nearly a decade. Unless federal funding for immunization keeps pace with current needs, I fear we will see more such outbreaks.

There is a solution — increased funding for public immunization. We have proven the success of the immunization program. This is a life saving investment, vital to protect the lives and health of our children. The March of Dimes asks you to expand this important program by appropriating $115 million for childhood immunization. This amount is necessary to increase the vaccine stockpile to a six-month supply as recommended by the Centers for Disease Control.

All of these programs — expanded Medicaid, maternal and child health, medical research, and childhood immunization — have proven their worth. They are investments in primary prevention. They are programs that make sense in terms of dollars we can save and they are programs that make sense in terms of human lives.

Senator PROXMIRE. Let me just ask you one question. The statement was so startling. Why has the cost gone up sixfold, from $5 to $30, and in how long a period?

Dr. GRAVEN. In about 7 years, from 1980 to 1986.

Senator PROXMIRE. That seems to outpace completely the inflation index, the cost of medical care, drugs, and so forth.

Why should that be?

Dr. GRAVEN. The cost of liability to the vaccine makers, who are being sued for adverse reactions for things where the vaccine was perfectly valid. The vaccine was appropriate, but if you immunize 100,000 children, there are going to be a very small number who get reactions, and they were suing the vaccine manufacturer for what, in fact, is a reaction to the vaccine.

Senator PROXMIRE. So, it is a matter of tort reform, then?

Dr. GRAVEN. Well, that is part of it.

Part of it, then, is because of the potential, or unknown, liability, the cost has gone up. A number of the manufacturers went out of the business, and it is a serious issue. I would hope the Congress would not let that drift away.

If there ever has been major progress in preventive health services, it is very clear that vaccine preventible diseases ought not to be here.

Senator PROXMIRE. Now I didn't know that. That is very helpful. That is the kind of thing we ought to know in this body.

Thank you very much, Dr. Graven.

PREPARED STATEMENT OF MICHAEL TEITELBAUM

Our next witness is Michael Teitelbaum, Population Association of America.

[Pause]

Senator PROXMIRE. Mr. Teitelbaum is not here, I understand, so we will put his statement in the record.

[The statement follows:]

STATEMENT OF MICHAEL TEITELBAUM, D.PHIL., CHAIRMAN, PUBLIC AFFAIRS COMMITTEE, POPULATION ASSOCIATION OF AMERICA

Mr. Chairman and Members of the Subcommittee on Labor, Health and Human Services and Education of the Senate Appropriations Committee I appreciate the opportunity to speak to you today regarding support for demographic research at the National Institute for Health (NIH), particularly through the National Institute for Child Health and Development (NICHD) and the National Institute on Aging (NIA).

I appear before you today on behalf of the Population Association of America (PAA), the professional research society of some 2,600 demographers, economists, geographers and sociologists. Indeed, PAA represents nearly all those involved in scientific research on population and demography. Research in this broad area ranges widely, from identifying factors that affect Americans' childbearing decisions to exploring reasons for elderly interregional migration. Demographic and behavioral facets of population research provide invaluable analyses for effective planning in both the public and private sector. While PAA members receive research support from many sources, an important funding source for demographic research comes from NIH, particularly through the Center for Population Research at NICHD and from the National Institute on Aging.

The Demographic and Behavioral Sciences Branch of NICHD's Center for Population Research supports a wide range of research on the growth and distribution of our population in relation to individual and societal welfare, of which I would like to highlight two areas for you today: adolescent pregnancy and AIDS research.

Current research on adolescent pregnancy and childbearing focuses on the stages in the process that may lead eventually to an early birth. These stages include initiating sexual activity, initiating and continuing contraception, and behavior following an unexpected premarital pregnancy. Several studies are being conducted to determine some of the factors that influence adolescent contraceptive behavior. In addition, related research is assessing the hypothesis, often argued in Congressional debates, that motivation to avoid pregnancy is linked to young women's aspirations for future alternatives to motherhood.

Concerning AIDS research, a recent report on AIDS by the Institute on Medicine of the National Academy of Sciences indicated that predictions on the extent of the spread of AIDS are impossible since assumptions about current sexual behavior of the American people must be based upon data that are now 35 years out of date. In response to this need, the Demographic and Behavioral Sciences Branch is developing a major study on sexual behavior, contraceptive practice and sexually transmitted diseases including AIDS.

Current AIDS research areas within the Branch include: 1) preparation of a public use tape and report on data within selected areas of the U.S. concerning the relationship between sexually transmitted diseases (including AIDS) and fertility behavior: and 2) a study, using a nationwide representative sample, which is collecting data on reproductive behavior, fecundity, socioeconomic characteristics and sexually transmitted diseases, including AIDS. The Branch will also put out two Request for Proposals: 1) teenage sexual behavior, contraceptive practice and sexually transmitted diseases and AIDS; and 2) general fertility related behavior. These research efforts will add to our limited understanding of AIDS and assist in developing critical preventive measures.

For the Fiscal Year 1987, Congress responded to the concerns of many organizations about funding rates for NICHD and increased the appropriation from $308 in Fiscal Year '86 to $367 million in

Fiscal Year '87. While this increase represented a move toward putting NICHD on parity with other Institutions in relation to overall funding, due to the high cost of grants, NICHD's competing award rate in relation to NIH's decreased from FY '86 to FY'87.

The Population Association of America urges this Subcommittee to continue its support for research at NICHD and support the budget figure of $503 million for FY' 88. This amount, which would put NICHD's award rate at 33 percent, is needed to carry out the mandate of Institute to fund fully current grants and to assist in reaching parity with the FY '88 NIH overall award rate of 36 percent.

Another source of federal funding for demographic research is at the National Institute on Aging (NIA). Demographic research on aging is an emerging, expanding and exciting field. The major responsibility for stimulating and funding research in this area, is with NIA's Behavioral and Social Science Program, the Demography and Population Epidemiology Cluster.

Because we can project with a great deal of certainty the number of aged Americans and their distribution within the population, we have a tremendous opportunity during the next years to plan for the aging of American Society. We already know, for example, that the over-65 population is likely to double by the mid-2020's to over 58 million, and by 2050 will approach 70 million, accounting for more than 20 percent of all Americans. In addition, we know that the percentage of "oldest-old" in our population will almost double between now and the year 2000. Finally, we expect that between 2030 and 2050 the 85+ will be the only age group in the older population that is growing. There is a great deal we don't know, however, and much more that we cannot know until additional data are available.

The demographic research agenda at NIA has given priority to such topics as the Oldest Old. A major initiative on the Oldest Old was launched in 1984, but there is much still to be done in this area such as the examining of causes of death, determining why some groups of the very old are in robust health and others are not, and assessing which causes of decline are most preventable. While elderly migration is another major research area being undertaken, data on this issue has surfaced questions with tremendous policy implications. Do only healthy people migrate to Florida and other retirement areas? Do people "return home" when widowed or frail? Are the sick, poor, elderly concentrated in colder urban areas? For the well-being of American society these questions really need empirical answers.

Unfortunately, it has become apparent that current data sets and current data sources are grossly inadequate in the area of aging statistics. Awareness of this problem prompted Congress last year to suggest that the National Institute of Aging allocate a half million dollars to set up an interagency forum on aging-related statistics. This significant first step needs continued and expanded support. In addition, another area of need is specialized training for researchers. It is vital that the core of trained investigators be expanded to develop this critical research area.

Last year Congress responded to the tremendous demand for research at the National Institute on Aging by increasing the appropriation to $176.9 million. We urge this subcommittee to recommend an additional increase for Fiscal Year' 88 to $248 million. The appropriation level will enable the National Institute on Aging to study, address, and anticipate the numerous biological, psychological, demographic, and social interactions related to aging. This appropriation should enable continued funding for the oldest-old initiative, expanded efforts in data collection, continued support of the interagency forum on federal statistics and training of researchers in the demographic and aging area. In summary, Mr. Chairman, we believe that the amount of $503 million for NICHD and $248 million for NIA are amply justified, and we respectfully urge you to support NICHD and NIA in the appropriations process.

Senator PROXMIRE. Next is Dr. Myron Genel, Yale University School of Medicine.

[Pause]

Senator PROXMIRE. Dr. Genel apparently has stepped out of the room for a minute.

We will hear now from Jean Mahoney of Planned Parenthood Federation of America.

Ms. Mahoney, it is nice to have you. You have a tan that does credit to Palm Beach, FL, which is exactly where you come from.

STATEMENT OF JEAN MAHONEY, PLANNED PARENTHOOD FEDERATION OF AMERICA

Ms. MAHONEY. Thank you. We have had beautiful weather.

Mr. Chairman, members of the committee, I am Jean Mahoney, a past board chairperson of Planned Parenthood Federation of America, and I currently serve as the honorary chair of the Board of Planned Parenthood of Palm Beach County, FL.

I am appearing today on behalf of Faye Wattleton, the president of Planned Parenthood, who regrets that she could not be here. I have a prepared statement, which I would ask be included in the record.

Senator PROXMIRE. Without objection, that will be done.

Ms. MAHONEY. Planned Parenthood is the Nation's oldest and largest voluntary family planning organization, with 184 affiliates in 46 States and the District of Columbia. Each year, we serve some 2.3 million women and families with comprehensive reproductive health care.

I want to thank you and this subcommittee for the opportunity to present our views on the title X National Family Planning Program.

Mr. Chairman, title X is the backbone of the national family planning clinic network that provides medical and educational services to low income women and teenagers.

For the past 6 years, Congress has wisely resisted efforts by the administration to fold title X into a block grant.

In years past, title X would have been folded in with several other health programs. This year's proposal would simply turn all Federal title X dollars over to the States, abandoning the national standards for medical care and the national reporting system, which have helped to insure the provision of high quality, cost effective family planning services over the years.

We are confident that Congress will also reject this new variation on an old theme of trying to eliminate title X.

But while the primary focus of title X is contraception, preventing unwanted pregnancies and helping families time and space their childbearing, title X supported clinics offer a range of basic preventive health services, including screening and treatments or referral for anemia, hypertension, cervical and breast cancer, sexually transmitted diseases, and diabetes.

Clinics such as those financed through title X often are the first place low income women, and especially teenagers, receive formal medical care.

In recent months, U.S. Surgeon General Koop and other public health officials have recommended that family planning clinics help provide AIDS testing and counseling services, in addition to their existing services. Unfortunately, continuing pressure from the administration for major cuts in domestic spending has taken a toll on the title X program.

In fiscal year 1981, Congress allocated $166 million for family planning. Now, 6 years later, the program is receiving only $142.5 million.

Mr. Chairman, human behavior and societal health aren't particularly sensitive to congressional budget restraints. Unless funds are restored, the costly problem of unintended pregnancy is likely to threaten deficit reduction efforts through massive increases in health and welfare entitlement spending. This is particularly true among teenagers.

In conclusion, Planned Parenthood respectfully makes the following two recommendations to the subcommittee.

First, we recommend that funding for title X be continued at a level adequate to insure a continuation of the vital services now provided, as well as an expansion of services to the millions of women and teenagers in need, who currently are not being served.

Second, we recommend that a special supplementary fund of $10 million be provided specifically to boost contraceptive development research at the National Institute of Child Health and Human Development.

PREPARED STATEMENT

Senator PROXMIRE. Ms. Mahoney, could you summarize the remainder of your statement.

Ms. MAHONEY. I am at the end of my testimony.

Thank you for hearing from me.

[The statement follows:]

Statement of Jean Mahoney

I am Jean Mahoney of Palm Beach, Florida. I am a past board president of Planned Parenthood Federation of America, and I currently serve as the honorary chair of the board of Planned Parenthood of Palm Beach, Florida. I am appearing on behalf of Faye Wattleton, the President of Planned Parenthood, who could not be here today. I am also appearing on behalf of the more than 18,000 volunteers and staff who run our 184 affiliates in 46 states and the District of Columbia, the 250,000 individuals who contribute to our organizations, and above all, the more than 2.3 million women and men who are served by our clinics each year.

As you know, Title X of the Public Health Service Act is the core of our national family planning clinic network that provides subsidized services to low-income women and teenagers. For the seventh year in a row, the administration is seeking Title X's repeal in favor of its inclusion in a block grant to states. In years past, Title X would have been folded in with several other health programs. This year's proposal would simply turn all federal Title X dollars over to the states, abandoning the national standards for medical care and the national reporting system which have helped to insure the provision of high quality, cost-effective family planning services over the years. We are confident that Congress will continue its long-standing, bipartisan commitment to family planning this year and retain the Title X program as an important federal categorical program.

We urge the Congress and this committee to continue its important investment in the Title X program -- one federal program where a relatively small increase in spending this year results in tremendous savings in health care and social services costs to the government for many years to come. The important link between family planning and infant mortality was noted by the congressionally-mandated Select Panel for the Promotion of Child Health in 1981 when it reported that, "infant mortality, low birthweight and still births can be reduced through family planning."

Similarly, we urge you to increase support for population research, specifically authorized under Title X and Section 301 of the Public Health Service Act, and to place particular emphasis on applied research leading to the development of new contraceptive technology and on research designed to evaluate the safety and efficacy of existing methods.

Of 36 million American women who are seeking to avoid pregnancy, three million are using no contraception, and another three million are using the least effective methods. Intensified research in the development of new and improved methods of contraception could greatly enhance our ability as a society to lower the staggering 55 percent incidence of unintended pregnancy that still exists in this country today.

FAMILY PLANNING SERVICES

Mr. Chairman, the Title X program prevents unintended pregnancies, reduces the need for abortion, and provides basic health services to a large group of medically underserved women. Moreover, in addition to providing basic contraceptive services (including natural family planning) and infertility diagnosis, Title X-supported clinics also offer health screening assessments and either simple treatments or referral for anemia, hypertension, cervical and breast cancer, sexually transmitted diseases, kidney dysfunction and diabetes. Clinics such as those financed through Title X often are the first place low-income women - and especially teenagers - receive formal medical care. In recent months, U.S. Surgeon General Koop and other public health officials have recommended that family planning clinics help provide AIDS testing and counseling services, in addition to their existing services. Clearly, federal investments in the Title X program are wise and prudent, particularly at a time when the existing network of family planning clinics may be called upon to assist in halting the deadly AIDS epidemic.

Yet, despite the accomplishments of the Title X program, a tremendous number of women continue to go unserved. In the United States today, there are approximately 9.5 million low-income women and five million teenagers at risk of unintended pregnancy (that is, sexually active, fertile and not seeking to become pregnant). In 1983, the last year for which data are available, the organized clinic system made family planning services available to 5 million women, 1.6 million of whom were teenagers and 80 percent of whom were low-income, i.e., below 150 percent of the poverty line. Title X continues to be the single largest source of funds for this network, comprising 34 percent of the total federal and state expenditures. Primarily through the help of Medicaid or other arrangements, an additional 3.2 million women were able to obtain contraceptive services from private physicians. The rest did not receive services.

Unfortunately, the growing need for the contraceptive and basic reproductive health services provided by Title X has been met by a shrinking federal commitment of funds. In FY 1981, Title X was funded at $166 million. The effects of the 25 percent cut later that year and in FY 1982 were severe. Straining to avoid turning patients away, clinics around the country were forced to reduce the scope of their services, especially community outreach to "hard to serve" patients. They have found it difficult to maintain, much less expand, educational programs geared toward adolescents and their parents. A $16 million increase in FY 1984 and an additional $2.5 million for FY 1985 brought Title X funding from $124 million in FY 1982 to $142.5 million in FY 1985. Funding has been frozen at that level ever since.

Looking beyond the statistics and the proven record of accomplishment of Title X-supported programs, I believe the time has come to question the motives and the illogical proposals of those who, explicitly or not, would seek to destroy the current national family planning effort. These attacks, and calls to curtail or eliminate the delivery of family planning services, come almost exclusively from organizations whose primary mission is to once again criminalize abortion. Is it possible that they don't realize that eliminating the Title X program would lead to an increase in abortions? That deterring teenagers from seeking contraceptives by imposing a parental consent or notification requirement would lead to still more pregnancies among teenagers and more abortions? That excluding medically responsible individuals and organizations from the Title X program or from contracting for delivery of family planning services at home or overseas will lead only to more abortions?

While divisions on the question of abortion persist, I submit to you that we must all work together in supporting the means to reduce the need for abortion, a personal decision that no one makes without careful consideration and few choose without some measure of sorrow.

RESEARCH

Title X currently authorizes biomedical research in the reproductive sciences, social and behavioral studies, contraceptive development and contraceptive evaluation. The National Institute of Child Health and Human Development (NICHD) administers all these areas of research, which together are presently funded at approximately $109 million, only a tiny fraction of the total NIH budget. The irony, of course, is that the strides we are able to make as a society in this field directly touch the lives of virtually all Americans, not to mention the rest of the world, for which NIH is the major source of research and contraceptive technology and development.

We are especially concerned, however, about contraceptive research, with less than 10 percent of the current funding spent on population research going for applied research toward the development of new contraceptive methods and toward evaluating the safety and effectiveness of existing methods. The decision by G.D. Searle and Company to cease all U.S. sales of its intrauterine devices (IUDs) by itself has already severely curtailed the choices American women and men have had to control their fertility.

There will probably never be a single perfect contraceptive, since individual circumstances change over a lifetime, as do family planning goals and attitudes.

Yet in spite of the universal interest in better contraception, federal support for development of new or improved methods, as well as for the evaluation of the safety and effectiveness of current ones, has actually declined since FY 1981. Five years ago, the Office of Technology Assessment (OTA) recommended that an additional $20 million annually be provided in federal funding for contraceptive technology, noting that available research opportunities are only waiting to be exploited. This is not a field for which a single, even a massive injection of funds would be adequate. Rather, steady and reliable funding at a modestly higher amount could bring some of these leads to fruition.

Mr. Chairman, we need new methods of contraception. And we need to reassure ourselves about the safety and efficacy of current ones. We applaud NICHD's efforts in this area. At the same time, we strongly urge you to endorse a specific increase for applied research in contraceptive development and evaluation, through an earmark or committee report directives.

RECOMMENDATIONS

In conclusion, Mr. Chairman, Planned Parenthood respectfully makes the following two recommendations to the subcommittee. First, that funding for Title X be continued at a level adequate to insure a continuation of the vital services now provided, as well as an expansion of services to the millions of women and teenagers in need of services who currently are not being served.

And secondly, we recommend that a special supplementary fund of $10 million be provided specifically to boost the contraceptive development initiative already outlined by NICHD.

In this year of focusing on cost-effective programs, we believe that continued support for Title X and for contraceptive research should be high priorities.

Senator PROXMIRE. I want to thank you, and I want to tell you that your Senator, Chairman Chiles, was unable to be here because he is managing the budget bill on the floor of the Senate right now. He is the No. 1 key man right now in the Senate in handling that bill. He is fighting for money for your program as well as for others.

Ms. MAHONEY. Thank you very much. I know that. I watched him.

Senator PROXMIRE. Thank you.

Now, I understand that the next witness is Dr. Alfred Baumeister from Vanderbilt University.

STATEMENT OF ALFRED A. BAUMEISTER, VANDERBILT UNIVERSITY, IN BEHALF OF AMERICAN ASSOCIATION ON MENTAL DEFICIENCY, AMERICAN ACADEMY ON MENTAL RETARDATION, AMERICAN PSYCHOLOGICAL ASSOCIATION

Dr. BAUMEISTER. Mr. Chairman, my name is Al Baumeister. I am director of the Kennedy Center at Vanderbilt University, 1 of the 12 national mental retardation research centers.

I represent the American Association on Mental Deficiency, the American Academy on Mental Retardation, and the American Psychological Association.

We are grateful for the opportunity to share our views concerning support through NICHD for research on mental retardation and related disabilities.

There are over 250 causes associated with mental retardation, including genetic conditions, problems with pregnancy and birth, brain damage, due to teratogens, behavior problems, accidents, and other circumstances, such as poverty, undernutrition, and lack of stimulation.

But we emphasize even in those cases in which we have knowledge as to cause, that we know little about how to prevent or cure.

I recently presented written evidence to the President's Committee on Mental Retardation to show that, in fact, since 1980, the situation concerning children has worsened, a fact I also made known at a meeting of the White House Policy Committee last August.

The human and financial costs of mental retardation are staggering. No other affliction creates so much suffering for so long and at such great cost. Community and residential services alone will cost $10 billion this year. Yet, since 1974, commitment to mental retardation research has deteriorated.

Funding in both absolute and relative terms is in a much less favorable position today than 12 years ago.

Attached to my written testimony are data showing decline in relative support for mental retardation research from 1972 to 1986.

In 1986, NICHD expended $47 million on mental retardation research, about 15 percent of their total. We do not believe this is a level of response consistent with congressional intent in creating the NICHD or severity of the problem in human and financial terms.

In 1986, NICHD obligations came to $308 million. The 1987 appropriation was $366.8 million.

Now the administration proposes a budget of $345.4 million, less than in 1987.

We respectfully urge Congress to increase appropriations to NICHD to insure continuity of a national research effort. We specifically recommend the Congress to increase funding to NICHD from $367 million in the current fiscal year to $497 million. This is in contrast to the administration request for $345.4 million for fiscal year 1988.

The amount we recommend will allow full funding of 700 research grants, or 33 percent, of approved applications, up from 24 percent under the administration plan.

In addition to the other recommendations contained in my written testimony, I would like also to suggest at this point that the Congress express its commitment to the continuation of high quality, predoctoral and postdoctoral research training by increasing funds in this category by 10 percent.

I thank you.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very, very much, sir. That was fine testimony.

[The statement follows:]

STATEMENT OF ALFRED A. BAUMEISTER

Mr. Chairman my name is Alfred Baumeister. I am Director of the John F. Kennedy Center at Vanderbilt University. I represent the American Association on Mental Deficiency, the American Academy on Mental Retardation, and the American Psychological Association, Division on Mental Retardation. These are all professional organizations dedicated to prevention and treatment of mental retardation and related developmental disabilities. We are grateful for this opportunity to share our views concerning Federal research support on these problems through NICHD.

Mental retardation is a life-long disability with environmental and biological causes. The principal manifestations are subaverage intelligence, significant impairments to learning, social and physical development, and diminished ability to live independently. Over 200 different causes are associated with mental retardation, including genetic conditions, disorders of metabolism, problems of pregnancy and birth, brain damage due to a large number of teratogens, accidents, and other untoward circumstances that affect development, such as poverty, undernutrition, and lack of adequate psychological and social stimulation. But we must emphasize that even in many of those cases in which we have some knowledge as to cause, we know precious little about how to prevent or cure.

The human and financial costs to society of mental retardation and the other developmental disabilities are staggering. No other human affliction creates so much suffering, for so long, and at such great cost to the individual, the family, the community, and our nation. There are approximately 6,600,000 retarded persons in the United States today. To provide care and habilitation to the 130,000 retarded persons who reside in public institutions, we will spend about $5.0 billion this year. Community services will also cost about $5.0 billion. To give a concrete example, approximately 4,000 babies will be born this year with fetal alcohol syndrome. These babies will be severely retarded and most of them will require complete lifetime public assistance. I can conclude that this group of babies alone, born in just this year, will require over $4 billion for lifetime care.

The cost of education of a retarded child in the public schools is several times the amount expended on the education of a nonretarded child. The variety of special programs in the community that must be provided for our retarded citizens represents an enormous outlay as well.

The costs in terms of human suffering and in lost human resources and potential are beyond financial calculation. We must remember that mental retardation and the other developmental disabilities, if uncorrected, typically persist over a life time and that many thousands of babies will be born in this decade who will never have a chance, for even part of their lives, to share in the ordinary opportunities and challenges that we here enjoy.

Because Congress has responded in the past, we have made enormous scientific progress toward the twin goals of prevention and amelioration. For example, we now understand the biochemistry underlying some specific genetic disorders and, through proper intervention, are now able to create medical and environmental conditions where people who only two decades ago would have been severely retarded are now able to live normal lives. Studies of behavior and social processes have enabled us to develop educationally based procedures that ameliorate many of the learning and behavior problems associated with mental retardation. We have also learned a great deal more about the causes of mental retardation, knowledge that can have enormous significant public policy implications. For instance, public policy has followed from the empirical demonstration that environmental exposure to various teratogens can cause a continuum of biological and behavioral risks ranging from very severe to mild in form.

Over the past few years a variety of exciting new behavioral and biomedical concepts and techniques have been incorporated into the study of mental retardation, such as the role of peptides and neurotransmitters in the functioning of the nervous system, sophisticated quantitative techniques for the study of neuropathology and neuroanatomy, the introduction of new cytogenetic procedures, the discovery of new methods for analysis of plasticity of behavioral development, improved understanding of how environments and biology interact, and new methods for promoting generalized learning and transfer of skills from one context to another.

Yet we cannot become complacent because, despite advances in our understanding of mental retardation and in our ability to intervene, the truth is that in most instances we do not know what causes retardation, or how to prevent it. One fact should be made clear--the source of developmental disabilities in most cases cannot be traced to a single specific biomedical cause.

Mental retardation, between 70 and 80% of the cases, is linked to psychosocial disadvantage. In 1985, 14.0% of our population, including 20% of our children were below the poverty line. But, as you are aware, minority groups are differentially represented. According to the government's own 1984 data, 46% of black children and 39% of Hispanic children lived in poverty. These are families who are located in the lower end of the socioeconomic scale. We need to know more about how biological vulnerability interacts with environmental circumstances to produce mental retardation. Much more research must be addressed to this most fundamental issue.

Why is socioeconomic status associated with mental retardation and emotional disturbance? What are the implications for prevention? These are important questions, ones that have been addressed before but not systematically and intensively. One fact emerges from an analysis of the relevant literature, much of it of fairly recent origin. Environment, including family background, plays a very significant role determining developmental outcome, even among neonates with medical problems. While it is true that some retarded people suffer from identifiable neuropathology, the vase majority do not. The studies before us show that, except for severe handicaps at birth, dysfunctions as defined by the "New Morbidity" are more strongly predicted by family variables and SES than by biological factors. Prevention strategies will have to be based upon environmental and social considerations.

The relatively high risk of developmental disabilities among groups at particular risk is best characterized by a transactional process in which certain children are psychologically and biologically vulnerable to environmental and social variations that predispose them to school, economic, and social failure--the "New Morbidity". Such complex social and health problems will not yield to insular, simplistic, and cosmetic solutions.

Yet, since 1974, the commitment to mental retardation research has deteriorated. For more than 10 years I have conducted various types of analyses of NICHD funding patterns with particular reference to the status of mental retardation as a funding priority. The one general and compelling conclusion emerging from these analyses is that funding for mental retardation research, both in absolute and relative terms, is in a much less favorable position today as compared with its status 12 years ago. In 1987 dollars, our research capability is less than half what it was in 1975. Core support funding for the 12 national Mental Retardation Research Centers has been severely eroded. Attached are a table and a graph showing a regular and continuing decline in relative support for mental retardation research, from 1972 to 1986. This data are based on the budget of the NICHD's Center for Research on Mothers and Children (CRMC), the organizational unit that carries the NICHD obligation to support mental retardation research.

In 1986, NICHD expended a total $47 million on research projects dealing with mental retardation, and related disorders out of budget of almost $308 million, about 15%. We do not believe that this is a level of response consistent with either: (a) Congressional intent in creating the NICHD, or (b) the severity of the problem of mental retardation in human and financial terms. It is also clear that much of what is counted as "mental retardation" research is not clearly relevant.

In 1986, NICHD obligations came to a total of $308,211,000. In 1987 appropriation for the Institute was $366,780,000. Now the Administration proposes a budget of $345,436,000, an amount substantially less than what Congress appropriated in 1987.

RECOMMENDATIONS

Expenditures for research related to mental retardation have declined steadily both in relation to inflation and as a proportion of the relevant program within NICHD.

We respectfully encourage the Congress to increase appropriations to NICHD to a level that, at the minimum, ensures the continuity of research and research training programs and at a level that begins to reduce the decline in funding for mental retardation research about which we spoke earlier. We believe that this can be done in two ways: First, the Congress should provide for an increment in the NICHD budget adequate to offset the cumulative effects of inflation and to accelerate the effort in mental retardation research. Second, and more specifically, we urge you to specify that mental retardation and developmental disabilities research should be elevated as a priority.

My colleagues and I also request that some of the implications of the information presented in our comments be reflected in narrative report language. We believe that improvement of mental retardation services depends on excellent basic behavioral and biological research in the areas of prevention, early diagnosis and intervention, learning, and long-term care. Most important, because mental retardation is a constellation of behavioral phenomena with numerous biological and psychosocial causes, collaborative research programs incorporating behavioral and biological components should be fostered: We urge:

1. The Congress to increase funding to NICHD from $367 million in the current fiscal year to $497 million. This is in contrast to the Administration request for $345.5 million for fiscal year 1988. The amount we recommend will allow full funding of 700 research project grants, or about 33% of approved applications in FY1988.

2. The Congress to mandate that at least 25% of the extramural support of NICHD be for projects directly relevant to mental retardation, including an emphasis.

3. That the Mental Retardation Research Centers be designated as a special item in the budget and that the amount designated for core support of these Centers be increased by $3,000,000.

4. The Congress to express its commitment to the continuation of high-quality predoctoral and postdoctoral research training by increasing funds in this category by 10%. This amount would support 800 full-time training positions, reversing a long-term downward trend.

5. An amount should be included in the NIH Building and Facilities appropriations for construction of Building 49, the combined NICHD, Neurosciences and Primate Building.

Trends in MR Funding*

(Millions of Dollars)

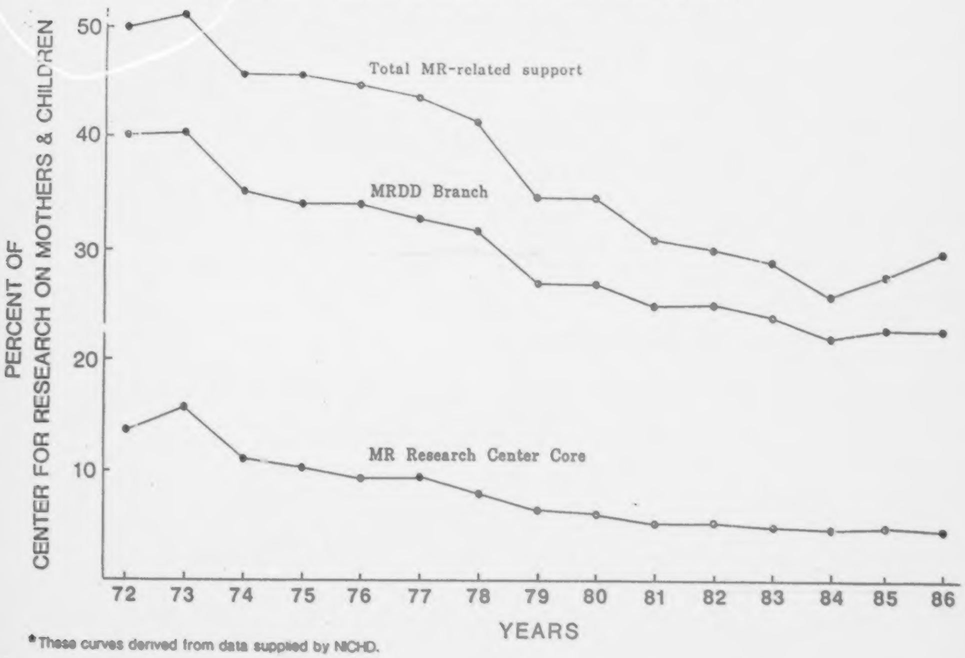
Year	Total CRMC Funds	Total CRMC-MR	MRDD	MRRC Core
1972	42,838,000	21,365,000	17,250,000	5,856,000
1973	41,971,000	21,330,000	16,642,000	6,533,000
1974	51,894,000	23,886,000	18,096,000	5,761,000
1975	55,094,000	25,420,000	18,884,000	5,672,000
1976	60,161,000	27,016,000	20,423,000	5,608,000
1977	64,979,000	28,419,000	21,434,000	6,166,000
1978	73,790,000	30,298,000	23,318,000	6,455,000
1979	102,492,000	35,321,000	28,121,000	6,759,000
1980	101,154,000	34,731,000	27,559,000	6,751,000
1981	106,055,000	32,997,000	26,969,000	6,623,000
1982	105,530,000	31,768,000	25,963,000	6,549,000
1983	123,346,000	35,270,000	29,306,000	7,343,000
1984	135,489,000	35,699,000	29,263,000	7,737,000
1985	157,727,000	44,329,000	36,365,000	9,298,000
1986	158,009,000	47,008,000	36,478,000	8,378,000

Trends in MR Funding* (Continued)

Year	Total CRMC-MR	MRDD	MRRC Core
Percents of Total CRMC			
1972	50	40	13.7
1973	51	40	15.6
1974	46	35	11.1
1975	46	34	10.3
1976	45	34	9.3
1977	44	33	9.4
1978	41	32	8.7
1979	34	27	7.0
1980	34	27	6.7
1981	31	25	6.2
1982	30	25	6.2
1983	29	24	6.0
1984	26	22	5.7
1985	28	23	5.9
1986	30	23	5.3

*Source of Data: NICHD, Office of Planning and Evaluation

TRENDS IN SUPPORT OF MENTAL RETARDATION RESEARCH*



*These curves derived from data supplied by NICHD.

STATEMENT OF JACQUELINE DARROCH FORREST, DIRECTOR OF RESEARCH, ALAN GUTTMACHER INSTITUTE

Senator PROXMIRE. Our next witness is Jacqueline Darroch Forrest, director of research at the Alan Guttmacher Institute.

Ms. Forrest.

Ms. FORREST. Thank you, Senator Proxmire.

I am Jacqueline Darroch Forrest, director of research at the Alan Guttmacher Institute, which is an independent, nonprofit corporation for research, policy analysis, and public education in matters related to reproductive health and population.

I would like to thank you for the opportunity to talk with you today, and I do have a written testimony as well as two articles related to the materials that I am going to be presenting, which I would like to submit for the record.

Let me suggest, Senator, that America confronts two haunting social problems—unacceptable high rates of infant mortality and high rates of abortion. Both problems could be alleviated in large measure by helping American couples to avoid unintended pregnancies.

A major report by the National Academy of Sciences Institute of Medicine concluded that the first step in reducing low birth weight babies and the resulting high infant mortality rates in this country is the prevention of unintended births to high risk women.

Among the Institute's specific recommendations was increased access to family planning services, with special emphasis on low-income women and unmarried teens, highlighting the importance of the title X family planning program.

Reducing rates of unintended pregnancy clearly will also help to reduce recourse to abortion in the United States, for both teenagers and adult women.

Another recent National Academy of Sciences report, addressing the problems of adolescent pregnancy and child bearing, concluded that pregnancy prevention would offset the need for most abortions and should be our Nation's top priority in this area.

The academy panel, of which I was a member, concluded that availability of contraception is the most effective intervention we now have for reducing unintended pregnancy.

Mr. Chairman, an inordinately large number of U.S. women have unplanned pregnancies because they mistakenly worry about the safety of existing methods and see none suitable to their needs.

The shocking fact is that we are in a unique position of losing contraceptive options at the same time that new methods are being introduced in other countries.

Increasing the amount and the stability of Government funding for research on contraceptive development can lead to new methods that will be safer, more effective, and easier to use. Continued evaluation of safety and efficacy is crucial to debunk myths about current methods.

The National Institute of Child Health and Human Development designed a contraceptive development initiative some 2 years ago to accelerate the development of new contraceptive methods and to insure the continued safety of existing ones.

We commend to the committee's consideration an additional $10 million in fiscal year 1988 funding for this initiative. There can be little doubt of its long-run cost effectiveness in both human and economic terms toward reducing unintended pregnancy, infant mortality, and abortion.

Thank you.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very, very much. We will insert your statement in the record at this point.

[The statement follows:]

STATEMENT OF JACQUELINE DARROCH FORREST

Mr. Chairman, I am Jacqueline Darroch Forrest, Director of Research for the Alan Guttmacher Institute (AGI), an independent, nonprofit corporation for research, policy analysis and public education in matters related to reproductive health and population. On behalf of AGI, I would like to express my appreciation for the opportunity to appear before you today to discuss a matter that we believe deserves your concerted attention, because it is of importance to men and women of childbearing age throughout the country: contraceptive availability.

Let me suggest, Mr. Chairman, that increasing the availability and effective use of contraceptives by American couples could -- and should -- be linchpins in our attempts to confront and arrest two haunting social problems: unacceptably high rates of infant mortality in the United States and high rates of recourse to abortion in the United States. While these two issues are not often spoken of in the same breath, because their politics are perceived to be quite different, they are, in fact, closely related in that both problems could be alleviated in large measure by helping American couples to avoid unintended and mistimed pregnancies.

In 1980, Mr. Chairman, the U.S. Surgeon General set a national goal of reducing infant mortality rates among minorities and low-income women by almost half by the end of this decade. However, in a "Midcourse Review," released only a few months ago, Dr. Koop concluded that the nation will not meet its goal by 1990 - possibly not even until the end of this century. As you certainly know, Mr. Chairman, low birthweight is the major factor associated with the death of infants in the first four weeks of life. As a society, one thing we clearly must do to address this problem is to provide access to high quality prenatal care for all expectant mothers in our country -- and your personal efforts in that regard are to be highly commended. At the same time, we must note that, according to a major report by the National Academy of Sciences' Institute of Medicine (IOM), the first step in reducing both low birthweight and the resulting high infant mortality rates is the prevention of unintended births to "high risk" women. These women include teenagers, women who have only short intervals between pregnancy, women of low socioeconomic status, women with lower levels of education, and those who are unmarried. Among the IOM's specific recommendations was increased access to family planning services, with special emphasis on reaching low-income women and unmarried teenagers under 18. The importance of the federal Title X family planning program in accomplishing this objective was specifically emphasized.

At the same time, Mr. Chairman, reducing rates of unintended pregnancy clearly will also help to reduce recourse to abortion in the United States. This holds true both for teenagers and for adult women. Teen pregnancy was the focus of another recent National Academy of Sciences' report, one released last December by its National Research Council. This report made special note of the fact that the painful controversy surrounding abortion has only exacerbated our society's difficulties in addressing the national problems of adolescent childbearing and parenting. Yet, ironically, reducing unintended pregnancies would offset the necessity for many abortions now sought by adolescents in the first place. While recognizing that "there are no easy answers or quick fixes," the NAS report concluded that adolescent pregnancy prevention should be our nation's top priority in this area and that the availability of contraception is the surest strategy -- the most effective intervention we have -- for implementing this goal.

It seems clear that better contraceptive use should be able to make major inroads towards ameliorating both the very serious societal problem of infant mortality and the equally serious -- and politically explosive issue of unintended pregnancies and abortion. However, no such strides can be made unless contraceptives are both available and effectively used. It has been well established that contraceptive prevalence and consistent use are higher where there is a greater selection of contraceptive methods. Yet, for a plethora of reasons, the shocking fact is that U.S. women and men are in the unique if uneviable position of losing contraceptive options at the same time that new methods are being regularly introduced around the world. Studies performed by the Alan Guttmacher Institute have revealed a range of obstacles currently facing contraceptive research, development and marketing in this country, and with your permission, Mr. Chairman, I will submit for the record two articles published in Family Planning Perspectives, which summarize the results of those studies. These obstacles may be daunting, but hopefully they are not insurmountable. Prominent among them are insufficient and unstable funding, which has declined worldwide by about 25 percent in real dollars since the mid-1970s; the high cost of liability insurance for contraceptive products, which together with the virtual impossibility of obtaining insurance for clinical tests on humans, is leading to a near-paralysis of research into new methods; and the complex premarketing requirements and regulatory procedures of the FDA which delay approval of many methods for use in the United States. Not surprisingly, only one private U.S. pharmaceutical company remains in the business of conducting contraceptive research and development directed towards the U.S. market.

While no single entity, including the U.S. government, can solve this problem in its entirety, the problem will only grow worse if not addressed. Mr. Chairman, you and your committee possess one key - by increasing both the amount and the stability of government funding for research leading to contraceptive development, you open the door for new methods that will be safer, more effective and more accessible to the individuals who need them most. At the same time, continued government efforts to evaluate the safety and efficacy of methods now in use also are critical. Such government research can be critically important in debunking myths surrounding certain methods -- particularly the birth control pill -- that still are pervasive in our society. Accurately altering people's erroneous perceptions of the health risks and benefits of certain contraceptives can lead to better use by allowing Americans to take full advantage of the few options still available to them.

Recognizing the need to accelerate the development of new contraceptive methods, and to ensure the continued safety and efficacy of existing ones, the National Institute of Child Health and Human Development (NICHD) designed a Contraceptive Development Initiative some two years ago. While the initiative has produced some progress in a few areas, it is clear that it has not been able to meet its full potential due to lack of adequate funds. Accordingly, we commend to the committee's consideration an additional $10 million in FY 1988 funding for NICHD, directed specifically toward this initiative. There can be little doubt of such an initiative's cost-effectiveness in both human and economic terms over the long run.

STATEMENT OF AUDREY R. McMAHON, CHAIRMAN, SCIENTIFIC STUDIES COMMITTEE, THE ASSOCIATION FOR CHILDREN AND ADULTS WITH LEARNING DISABILITIES

Senator PROXMIRE. Our next witness is Audrey McMahon, scientific studies chairperson, Association for Children and Adults with Learning Disabilities.

I want to commend Ms. Forrest for her concise testimony.

Please go ahead.

Ms. McMAHON. Thank you for this privilege.

I am Audrey McMahon, representing the Association for Children and Adults with Learning Disabilities, which is a parent-run, voluntary organization. We number some 60,000 members, well and personally versed in learning disabilities, and I am here to make a connection between fetal vulnerability to insults, many preventable, and subsequent learning and behavior dysfunctions.

Research on the developing nervous system being done at the National Institute of Child Health and Human Development offers help of preventing learning disabilities in millions of babies. Learning disabilities is the most prevalent of all neurological disorders. It is also the fastest growing handicapping condition affecting the Nation's children.

Furthermore, learning and behavioral disabilities do not necessarily disappear in chidhood, as many would like to think. The presence of neuropsychological deficits has been validated on a national basis through an ACLD research project funded also by the U.S. Department of Justice to examine links between learning disabilities and juvenile delinquency.

Thirty-two percent of delinquents were found to be significantly learning disabled. Information is lacking so far about other categories of society's worrisome misfits, such as pregnant teenagers, adult illiterates, suicides, and, of course, the homeless.

But the cost of special education at school is probably a very small fraction of the real tragedy and expense of learning and behavior dysfunctions to the Nation.

There is no stronger example of how much can be gained for so costwise a project as NICHD's low birth weight incentive. By pediatric consensus, the sequellae of low birth weight include a high incidence of neurological signs, lower school performance, impaired motor and visual-motor coordination, higher incidence of electrophysiological abnormalities, and the list goes on.

A striking fact recently evidenced through lead research is that toxic insults experienced in utero can affect cognitive development on and on over the years, regardless of a clear postnatal environment.

The National Institute of Child Health and Human Development is developing seven maternal-fetal and seven neonatal centers where collaborative studies conducted in the two networks can address combined basic and clinical issues.

No effective way is known to reverse developmental brain dysfunctions. Many possibilities are seen for prenatal prevention of insult in the first place, and our association believes that an aggressive tack to reduce impairments is not only humane, but cost effective, and we urge this Appropriations Committee to insure a budget of $497 million for the NICHD.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very, very much, Ms. McMahon, for your fine testimony.

[The statement follows:]

STATEMENT OF AUDREY R. MCMAHON

Mr. Chairman, I am Audrey McMahon, chairperson of the Scientific Studies Committee of the Association for Children and Adults with Learning Disabilities. I appreciate the opportunity to testify before you today regarding the budget for the NICHD.

Everyone in the learning disabilities field appreciates and thanks Congress for its perception and foresight in directing the Interagency Committee on Learning Disabilities to assess Federal research priorities, activities, and findings about learning disabilities. It was an affirmation of the national importance of this problem. The interagency committee report, which is due to be delivered to you in May, is likely to give evidence of school age academic deficiencies which are amply documented. We urge you to weigh as well the concomittant behavioral and social competence deficits which stem also from central nervous system dysfunctions, which are even more devastating than dyslexia in the lifelong perspective, but may not be so easily quantified.

Several studies and surveys have been conducted investigating the prevalence of neuropsychological deficits. Only one of these studies was conducted on a national basis which produced validated data. This was the ACLD-Research and Development Project, funded by OJJDP/U.S. Department of Justice to examine the links between learning disabilities and juvenile delinquency.

The study found that 32 percent of the juvenile delinquent population (community-based and incarcerated) were learning disabled. Taking only those incarcerated, 70 percent were learning disabled. More significant, the study established that as adolescents with learning disabilities advance through their teens, they become involved in more serious and violent delinquent activity than their non-LD peers with substance abuse as a threshold for violent criminal activity.

Information is lacking about other categories of society's worrisome misfits such as pregnant teenagers, adult illiterates, youth suicides, and of course the homeless.

Our association urges Congress to review the interagency committee's major recommendations with an eye to services for the learning disabled and especially with an eye to multidisciplinary research in the underlying brain dysfunctions and most especially to the period from conception to three when the developing brain is so vulnerable.

This brings us to the National Institute of Child Health and Human Development. Prenatal and perinatal research on prevention bears phenomenal promise. Documentation for educational and intervention projects on prevention, such as those the Surgeon General's Office and the State health departments pursue, begins with NICHD research. There are few stronger examples exemplifying how much can be gained for so cost-wise an investment as the NICHD"s low birth weight incentive, which is now hampered by limitation of funds. Low birth weight correlates highly with all the developmental disabilities of which learning disabilities is the least overt but most prevalent, aside from the fact that two-thirds of neonatal mortality occurs in the low birth weight category. A recent review of the literature on prenatal and perinatal factors relevant to learning disabilities include 11 subject categories plus recommendations. Under low birth weight sequelae there was a concensus on the following: Higher incidence of soft neurological signs; lower school performance; impaired visuo-motor, and motor coordination; more electroencephalogram abnormalities; and the list goes on.

Included in the low birth weight initiative is the development of seven maternal/fetal and seven neonatal centers where collaborative studies conducted in the two networks can address combined basic/clinical issues.

Possibilities intrinsic in the new pertussis vaccine developed by the National Institute of Child Health and Human Development may eliminate the possibility of central nervous system reactions, and allow earlier administration. New indications that a vitamin may reduce the effects of intracranial hemorrhage need documentation. Studies now in progress on intrauterine growth retardation, membrane properties, toxins which cross the placenta and genito urinary infections are among the many Institute projects which may bear directly or secondarily on future learning disabilities and other developmental disabilities.

ACLD urges the Appropriations Committee to provide a budget of $497,030,000 for the National Institute of Child Health and Human Development.

Thank you.

Senator PROXMIRE. Our next witness is a witness to represent the research to prevent blindness, but no name is given for that witness.

Is there a witness here in that category?

[No response.]

Senator PROXMIRE. If not, the next witness is Dr. Samuel Genensky, executive director of the Center for the Partially Sighted.

Congressman Mel Levine wanted very much to be with you, and I am sure he is anxious to have you testify.

STATEMENT OF SAMUEL M. GENENSKY, PH.D., EXECUTIVE DIRECTOR, THE CENTER FOR THE PARTIALLY SIGHTED, SANTA MONICA, CA

Dr. GENENSKY. Yes, sir; I am speaking for both of us.

Senator PROXMIRE. Very good. Go right ahead.

Dr. GENENSKY. Thank you.

I come before you today to argue in favor of the creation of a National Information and Referral Center for Partially Sighted People. Such a center is needed because there are more than 2 million partially sighted people in the United States and about one out of five of them are legally blind. An examination of the legally blind population reveals that better than 76 percent of the legally blind turn out to be partially sighted.

Further, it is an unfortunate fact that all too frequently, partially sighted people are offered services that are, at best, suitable for the totally blind, or they are offered no help at all.

It is also an unfortunate fact that, when these people receive such services, the cost to the American public is much greater than it need be because services for the partially sighted are much less expensive than services for the totally blind.

Although limited in number, there are ophthalmologists and optometrists in private and in group practice who are knowledgeable and experienced in low vision visual care, and who include such care in the course of their practice.

Further, there are low vision clinics that are manned by such persons, and there are a small number of comprehensive visual rehabilitation centers that provide not only low vision visual care, but a variety of other services that are needed by partially sighted people.

Again, unfortunately, all too few partially sighted people know the whereabouts or even the existence of such services.

The center that we have in mind would collect, evaluate, and update information concerning persons and organizations that provide services that are important to the partially sighted; make that information available to the partially sighted, to those that serve that population and to the general public via publications of the center and via the print and electronic media; and urge the people who respond to this material and to that media to write or phone the center for additional information and for referrals.

It would then, of course, provide the additional information and referrals to sources of assistance that are as close as possible to where the people live who are in need of those services.

My colleagues and I at the Center for the Partially Sighted have determined that the first year cost of such a center would be about $600,000. Congressman Levine and I are urging that the Congress approve and fund such a center for a period of 5 years at a total cost of about $3.2 million.

PREPARED STATEMENT

Thank you very much for the opportunity to appear before your committee and to make a case in favor of the Center for the Partially Sighted.

Thank you, sir.

Senator PROXMIRE. Thank you very much, Dr. Genensky. We very much appreciate your fine testimony.

[The statement follows:]

STATEMENT OF SAMUEL M. GENENSKY

We come before you today to argue in favor of the creation of a National Information and Referral Center for the Partially Sighted.* Such a Center is needed for the following reasons:

(1) There are more than two million Americans who are partially sighted,

(2) One-fifth of these people are also legally blind.

(3) Those who are legally blind make up more than 76 percent of the legally blind population.

(4) All too frequently partially sighted people tend to receive (a) services that are at best suitable for the totally blind, or (b) no services at all.

(5) The former alternative (4)(a) is tragic for two reasons: (A) Partially sighted people need services that encourage and help them to use their remaining eyesight, together with appropriate low vision visual aids, to function as visually and as independently as possible. Services that are useful for the totally blind are based on the principle of visual substitution, rather than visual enhancement. And (B) services geared for the totally blind are not only inappropriate for partially sighted individuals, but are also far

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* For additional information concerning the partially sighted and other subdivisions and characteristics of the visually impaired population, the reader is referred to Appendix A to this testimony.

more costly than services designed for the special needs of partially sighted people. Hence when services that are appropriate for the totally blind are given to partially sighted people, limited public and/or private resources are wasted.

(6) The latter alternative (4)(b) is also tragic because even though partially sighted people have valuable remaining vision, that vision is limited. Hence they too need assistance, though as pointed out in (5), the help that they require differs from that needed by the totally blind and is far less costly to provide.

Further, experience has shown that partially sighted people are able to perform such sight-intense tasks as:

(1) reading ordinary ink printed material; **

(2) writing with a pen or pencil;

(3) moving about alone in even unfamiliar places without the help of a guide dog, a cane, or a fully sighted person;

(4) viewing a computer screen while operating a computer; and

** Dr. Genensky, as Congressman Levine has already pointed out, is himself severely partially sighted. Even so, he can perform all of these tasks using various low vision visual aids. Further, experience at The Center for the Partially Sighted and at other comprehensive visual rehabilitation centers and low vision clinics strongly indicates that Dr. Genensky's visual achievements have been matched and even surpassed by other partially sighted people, particularly by those who see visual detail better than he does.

(5) looking at a chalkboard and taking notes on or copying what is seen on that chalkboard.

All these partially sighted people need to accomplish these tasks are:

(1) prescription of appropriate low vision visual aids;

(2) thorough training in the proper use of those visual aids; and

(3) the will to utilize them.

Although few in number, there are:

(1) optometrists and ophthalmologists in private or group practice who are knowledgeable and experienced in low vision visual care and who include such care in their practices;

(2) low vision clinics that are staffed by such eye care doctors; and

(3) a small number of comprehensive visual rehabilitation centers that provide a wider spectrum of adjunct services needed by partially sighted people.

Unfortunately, most partially sighted people are unaware of the whereabouts or even the existence of such services. Experience at The Center for the Partially Sighted in Santa Monica, for example, has shown that as a result of short articles in publications that have a large national circulation the Center has received and responded to over 15,000 requests for information and referrals for assistance from partially sighted people, their friends and their families living in every state in the union.

The National Information and Referral Center that we are urging you to bring into existence would:

(1) collect and update information concerning qualified persons and organizations that provide visual, emotional, mobility, independent living, educational, vocational, recreational, and/or financial services that are of importance to partially sighted people;

(2) make this information known to the partially sighted, to those that serve that population, and to the general public via various National Center publications, as well as via the print and electronic media;

(3) urge the people reached by these publications and media to write or phone the National Center for additional information and for referrals: and

(4) provide the additional information, via the phone or by mail, and make referrals to sources of assistance that are located as close as possible to where the person lives who is to benefit from that assistance.

Genensky and his colleagues at The Center for the Partially Sighted in Santa Monica estimate that the operating cost of the proposed National Center in FY 1987-88, in terms of 1987 dollars, would be approximately $600,000. We are recommending that the Congress establish and fund such a Center for a period of at least five years. {Appendix B to this testimony contains a detailed cost estimate for operating the National Center during its initial year of operation.}

Thank you for giving us the opportunity to appear before your distinguished committee and to make our case in favor of the estalishment of a National Information and Referral Center for the partially sighted.

Appendix A

Additional Information Concerning the Partially Sighted and Other Subsets of the Visually Impaired Population

The partially sighted are those people (a) whose best corrected visual acuity in their better eye does not exceed 20/70 but is better than light perception or light projection, and they are (b) those people whose best corrected visual acuity in their better eye does exceed 20/70 but the maximum diameter of their visual field does not exceed 30 degrees.

Less precise, but perhaps more understandable, is the definition that states that the partially sighted are (a) those people who, even with the help of ordinary eyeglasses or contact lenses, could not read newspaper column type when they hold the newspaper at ordinary reading distances of from 10 to 16 inches, but who can do more visually than simply see light and/or determine the direction from which the light is coming; and (b) they are also the people who can read newspaper column type when they hold the newspaper at ordinary reading distances, but their field of view does not fill out the area occupied by a 10-inch diameter dinner plate viewed straight on at a distance of 18.6 inches.

Table 1 gives the size of various subdivisions of the visually impaired population of the United States in 1984 for a number of age ranges. From that table it can be seen that, for example, in 1984 there were 2,111,400 partially sighted Americans and that 418,500 of them were legally blind. Further, it will be noted that in each of the categories shown in the Table most of the people are older Americans. For example, 1,177,500 of the partially sighted were at least 65 years old, as were 296,200 of those 550,600 who were legally blind.

Dr. Genensky reports that his Center sees partially sighted people of all ages, that more than 70 percent of them are at least 60 years old, and that about 50 percent of the patients are in the age range 70 to 90. Further, comprehensive visual rehabilitation centers in other parts of the nation report similar statistics.

The legally blind who are not partially sighted are known as the functionally blind. That population consists of the totally blind and of those people whose best corrected visual acuity in their better eye is rated either as light perception or light projection.

Persons having light perception are able to see light but they are not able to determine the direction from which the light is coming.

Table

THE CENTER FOR THE PARTIALLY SIGHTED

919 Santa Monica Boulevard, Suite 200, Santa Monica, California 90401 (213) 458-3501

ESTIMATES OF VARIOUS SUBSETS OF THE VISUALLY IMPAIRED POPULATION OF THE UNITED STATES - 1984

Age	Partially Sighted	Partially Sighted but not Legally Blind	Legally Blind	Partially Sighted and Legally Blind	Functionally Blind
0-4	6,100	4,900	2,000	1,200	800
5-19	116,400	93,300	35,300	23,100	12,200
20-44	364,000	291,900	99,200	72,100	27,100
45-64	447,400	358,700	117,900	88,700	29,200
65-74	365,100	292,700	94,100	72,400	21,700
75-84	414,400	332,300	103,700	82,100	21,600
85+	398,000	319,100	98,400	78,900	19,500
TOTAL	2,111,400	1,692,900	550,600	418,500	132,100

The Legally Blind population consists of Partially Sighted people who are also Legally Blind, as well as Functionally Blind people.

The Partially Sighted population consists of Partially Sighted people who are not Legally Blind, as well as Partially Sighted people who are Legally Blind.

See the attached list of definitions of all the categories used in this table.

Prepared by Samuel M. Genensky, Ph.D.
Revised January 1986
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Persons having light projection are able to see light and to determine the direction from which the light is coming.

Persons are said to be legally blind if (a) the best corrected visual acuity in their better eye does not exceed 20/200, or (b) if the best corrected visual acuity in their better eye does exceed 20/200 but the maximum diameter of their visual field does not exceed 20 degrees.

A less precise but perhaps clearer definition states that persons are legally blind if (a) even with the help of ordinary eyeglasses or contact lenses, the most that they are able to read on the ordinary Snellen Eye Chart at a standard distance of 20 feet is the big E, and (b) they are also legally blind if with those eyeglasses or contact lenses they are able to read more than the big E on the Snellen Eye Chart at a distance of 20 feet but their visual field would not fill out the area occupied by a 10-inch diameter dinner plate viewed straight on at 28.3 inches.

Persons are visually impaired if they are either partially sighted or functionally blind.

Persons are fully sighted if they are not visually impaired.

Appendix B

Cost Estimate for Operating A National Information and Referral Center for the Partially Sighted in FY 1987-88 Measured in 1987 Dollars

Personnel	Number of Days per Year	Cost
Directional Data Specialist	260	40,000
Assistant to the Directional Data Specialist	260	25,000
Computer Consultant	130	20,000
Programmer	156	18,000
Public Information Director	156	21,600

Appendix B--Continued

Cost Estimate for Operating A National Information and Referral Center for the Partially Sighted in FY 1987-88 Measured in 1987 Dollars

Personnel	Number of Days per Year	Cost	
Assistant to the Public Information Director	156	14,400	
Publications Writer	260	36,000	
Staff Consultants on Contents of Publications			
Consultant 1	104	20,000	
Consultant 2	104	20,000	
Consultant 3	104	20,000	
Secretaries			
Executive Secretary	260	25,000	
Secretarial Assistant 1	260	20,000	
Secretarial Assistant 2	260	20,000	
			$300,000
Fringe Benefits (Estimated at 20 percent of Personnel salaries)			60,000
Computer and Peripherals			25,000
Computer Programs and Supplies			15,000
Telephone Expenses (Including Special Equipment, Installation, Toll Free Number and Monthly Billing)			35,000
Office Equipment (Typewriters, mailing machine, duplicating machine, service contracts, etc.)			28,000
Office Supplies (paper, pens, pencils, paper clips, forms, files, etc.)			20,000
Travel			16,000
Overhead (computed at 25 percent of all the previous expenses less capital expenses and travel)			105,250
Total Cost			$604,250

If we assume that (1) the cost of running the National Information and Referral Center will increase at the rate of 8 percent per year, (2) during the first five years of its operation, the National Center will not need to purchase any additional computers or peripherals, special telephone equipment, or mailing machines, (3) the National Center probably will have to purchase another duplicating machine in the 4th year, a typewriter in the third year and a typewriter in the 4th year, and (4) the computer consultant will be needed only at one-quarter time during the 2nd through the 5th years, then the expected costs of running the National Center in each of the first five years of its operation will be:

Year of Operation	Cost
first	$604,250
second	569,430
third	616,151
fourth	673,001
fifth	717,318
Total Five Year Cost	$3,180,150

STATEMENT OF LINDA KROGH HAROOTYAN, MSW, DIRECTOR OF INFORMATION, THE GERONTOLOGICAL SOCIETY OF AMERICA

Senator PROXMIRE. Our next witness is Linda Krogh Harrotyan, of the Gerontological Society of America, speaking on the National Institute for the Aging.

Ms. Harootyan.

Ms. HAROOTYAN. Senator Proxmire, I am Linda Harootyan, director of Information at the Gerontological Society of America, and I am speaking today on behalf of the Gerontological Society as well as the American Psychological Association. My comments are directed to the budget of the National Institute on Aging.

Our concern has been the trend that we have observed in the Federal support for research, particularly on aging. While the Federal support for biomedical research has remained fairly constant in real dollars over the past decade, it has declined as a proportion of the health care costs. We spend $1 of research for every $1,000 of health care.

Biomedical research is also receiving a declining proportion of total research dollars. In spite of a growing older population, NIA remains the second smallest institute at NIH.

Our investment is declining and our need is growing. People are living longer, largely due, I might add, to investments in research.

We have also seen an increase in the incidence and duration of chronic illness associated with age and a quick review of the incidence and costs of some of these chronic diseases illustrates why these investments in research are critical to the future health of our Nation.

Alzheimer's disease, which affects 1.5 million to 4 million Americans, costs us $28 billion annually. Incontinence affects 2 million to 4 million elderly in the community, 40 to 50 percent in nursing homes, and, according to the U.S. Surgeon General, costs us $8 billion annually.

Osteoporosis, affecting 15 million to 20 million Americans has an annual cost of $3.8 billion.

These are only the current incidences and costs and can only be expected to grow as the older population grows.

We can discuss options to finance these costs, but it really is by discovering how, why, and under what circumstances age-related declines may be prevented, reversed, or ameliorated, that will have the most significant impact on lowering costs and dependency, and, I might add, adding to the quality of life of older persons and their families.

As important as disease-related research is, I don't want to overlook the importance of basic research on the aging process. Knowing more about normal processes of aging is crucial to understanding the potential for healthy longevity.

An obvious example of why understanding normal aging is so important is illustrated by the fact that for years, older people with many of a broad group of symptoms were diagnosed as becoming senile, a natural result of growing old.

People were told to accept their condition.

Today, we know that senility is not a part of normal aging, that some of the symptoms associated with normal aging are reversible, and that research on the diseases, which currently are not reversible, has increased.

Research on aging is an investment in the future health of our Nation. Our recommendation in our testimony asks that the NIA program be maintained minimally at current services. Clearly this level would not be adequate if we want to address the challenges of an aging society.

Thank you.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very, very much, Ms. Harootyan, for your testimony.

[The statement follows:]

STATEMENT OF LINDA KROGH HAROOTYAN

Chairman Chiles and distinguished members of the Subcommittee, I am Linda Krogh Harootyan, Director of Information, The Gerontological Society of America.

My testimony today is on behalf of The Gerontological Society of America and the American Psychological Association and is directed to the FY 1988 budgets for the National Institute on Aging, the Center on Aging at the National Institute of Mental Health, and the Title IV program administered by the Administration on Aging.

The Gerontological Society of America is a national, scientific organization of more than 6,000 researchers, educators, and other professionals in the fields of biology, clinical medicine, the behavioral sciences, and social research, policy analysis, and planning. The American Psychological Association, representing over 87,000 members, is the nation's major psychology organization.

The aging of our society is both a success story and a challenge. Largely due to investments in research, more people are living longer, and the quality of life is better.

These successes, however, are acccompanied by increases in the incidence of chronic diseases associated with aging. Together, these trends present a new and multidimensional challenge. Basic research on "normal" aging, and perhaps more importantly, "successful" aging, as well as on chronic disorders provides one of the principal ways of responding to this challenge and of charting the course of an aging society.

Incidence and Costs of Selected Chronic Diseases

A quick glance at the incidence and costs of a few of the chronic diseases most common to older people makes a compelling case why our investment in research is so critical to the future health of this nation.

- **Alzheimer disease** affects 1.2 to 4 million Americans at a cost of $28 billion annually (Office of Technology Assessmeent).

- **Incontinence** affects 2-4 million elderly living in the community and 40-50 percent of the elderly in nursing homes at an estimated cost of $8 billion a year (US Surgeon General).

- **Osteoporosis** affects 15-20 million Americans at an estimated cost of $3.8 billion annually (Office of Technology Assessment).

- **Osteoarthritis** affects 16-20 million elderly at an estimated cost of more than $7 billion.

Growing Implications of Health Care

The figures represent the **current** incidence and costs of these diseases. Absent discoveries of cures or prevention, the incidence and costs can only be expected to increase.

As the elderly population expands, the need increases for trained health care professionals and for trained researchers and scientists to study how to prevent age-related illness. Discovering how age-related declines may be prevented, reversed, or ameliorated could lower costs of health care and add to the quality of life of all age groups.

Normal Aging

Despite an understandable tendency to focus on disease-related research, we must not ignore basic research in the aging process. This holds the key to understanding the potential for healthy longevity.

Research supported by the Institute on Aging has demonstrated that old age is not a period of uniform or inevitable decline in all physiological and psychological functions. It is rather a period where there is enormous variation between individuals.

Why such variations exist is only beginning to be understood. Additional research is needed on the age-related changes in biological, neurological, and physiological functions, such as brain, renal, and cardiac functioning; changes in vision and hearing; and changes in such cognitive functions as intelligence, learning ability, memory, and decision-making ability. Additional research also is needed in the social and environmental factors which influence and promote healthy aging. Most importantly, we need to better understand "successful" aging.

All Generations Benefit From Research on Aging

Persons of all ages benefit from research. Taxpayers benefit from decreased health care costs. Families providing support to older relatives benefit from reduced caregiving costs. Young women of today benefit from osteoporosis research prescribing preventive maintenance. Basic research on Alzheimer disease also may provide new understandings about Down's syndrome and Parkinson's disease. Basic research on aging is an intergenerational transfer of knowledge benefiting persons of all ages as well as to those yet to be born. It is an investment in our common future.

FY 1988 Administration Proposal and Its Impact

The Administration's FY 1988 budget proposal calls for cutting back the National Institute on Aging's budget from $177 million in FY 1987 to $166 million in FY 1988. The Administration's figures for FY 1988 assume the extended availability of funds from FY 1987 to FY 1988, masking the real impact of these proposals. If the extended availability of the FY 1987 funds is disallowed, the funds available to NIA in FY 1988 would drop to $156 million (an 11 percent reduction), limiting the number of new grants that could be supported and causing approximately a 18.5 percent downward negotiation rate for both competing and noncompeting awards.

The proposed cuts come just when number of new and promising discoveries about Alzheimer disease are being made. A clinical trial to test the effectiveness of the THA drug is scheduled to begin this year in ten NIA-supported Alzheimer Disease Research Centers. The proposed cuts would force NIA to pull money from other programs to pay for the clinical trials.

Important NIA data collection efforts also are threatened under the Administration's proposals: (1) the field work phase of the third wave of the National Long-Term Care Survey; (2) the second wave of the Longitudinal Study on Aging; and (3) an extension of the International Database to include disability and health care useage.

Education and training activities also would be adversely affected by the Administration's budget. The proposals call for a reduction in the number of NIA research career awards from 87 (FY 1987) to 78 (FY 1988) and in the number of full-time training positions from 269 (FY 1987) to 249 (FY 1988). The Report on Education and Training in Geriatrics and Gerontology, published by the Department of Health and Human Services (DHHS) in 1984, documents the growing need for health and allied health professionals. If NIA's training programs continue at their same levels, only about one-half the projected need will be met.

The Administration's proposed budget reduction exacerbates the problem of attracting and retaining highly qualified researchers in the field of aging, thereby limiting NIA's ability to conduct research on the fastest growing segment of society.

The Administration's proposal would result in a reduction in NIA personnel. In 1984, the National Institute on Aging had 378 full-time equivalent positions. This figure has dropped steadily and is 343 in the FY 1988 Administration budget, leaving fewer NIA staff to handle a larger grant load due to special initiatives such as the Alzheimer centers and the teaching nursing homes.

The reduction in staff also has affected the start-up of several new programs such as the Laboratory of Molecular Genetics, and a newly established neurosciences program.

Monies for NIMH research grants and clinical research centers on mental disorders of the aging would be reduced by 10 percent under the Administration's proposals, from $16.5 million to $14.7 million. This is particularly severe when compared to the 7.3 percent reduction in the overall NIMH extramural research program. These programs have played a major role in helping eliminate excess disability problems and minimizing family stress associated with Alzheimer disease.

The Administration also proposes major cutbacks in NIMH's clinical training program in geriatric mental health. In FY '86, this program was funded for $2.7 million. The Administration's proposed FY 88 budget contains only $5 million for all NIMH clinical training programs. If this proposal is adopted, the entire program would end, leaving no provision for support of clinical mental health training in aging in any federal-level funding agency.

In addition, the Administration, disregarding the wishes of Congress, does not request any research funds under the newly enacted Alzheimer's and Related Dementias Health Services Act.

Recommendations

Recognizing the tight fiscal constraints facing Congress, The Gerontological Society of America and the American Psychological Association strongly urge you to continue these programs **at a minimum** at current services levels. An investment in these research and training programs may ultimately benefit us all through better health practices in earlier years and decreased health care and caregiving costs.

Because accurate data is needed to meet the challenges of an aging society, the GSA and APA recommend continued funding for the Statistical Centers on Aging.

These centers, coordinated through the NIA, help make federal statistical programs more efficient, reduce program redundancies, and identify vital data gaps.

The aging of America will present many challenges, particularly to you as members of Congress. It is through continued investments in the research, education, and training programs of the National Institute on Aging, the National Institute of Mental Health, and the Administration on Aging that we can reduce costs of health care and relieve pain and suffering.

STATEMENT OF DAVID R. CARPENTER, CHAIRMAN OF THE BOARD OF DIRECTORS, ALLIANCE FOR AGING RESEARCH, PRESENTED BY DANIEL PERRY, EXECUTIVE DIRECTOR, ALLIANCE FOR AGING RESEARCH

Senator PROXMIRE. Our next witness is David Carpenter, national chairman of the Alliance for Aging Resarch.

Mr. PERRY. Mr. Chairman, Mr. David Carpenter, who is the chairman of the board of the Transamerica Life Co., and also national chairman of the Alliance for Aging Research has caught a plane to California earlier today and asked if I be allowed to read a short summary of his statement and ask that his full statement be included in the record.

Senator PROXMIRE. Fine. It will be included in the record.

Mr. PERRY. Mr. Chairman, my name is Daniel Perry, and I am the executive director of the Alliance for Aging Research.

The Alliance is a newly formed, nonprofit, nonpartisan, private sector organization that combines the energies and resources of business executives, leaders of major foundations, several Members of Congress, and some of the top scientists in our Nation.

The mission of our alliance is to raise the visibility and priority of aging research as a major goal for United States science policy.

Our testimony concerns your consideration of an appropriate level of support for the National Institute on Aging. I would like at this time to commend you, Mr. Chairman, and the other members of this committee for your past leadership and support of the NIA and other health institutes that carry out aging research.

It is clear that our Nation's social and economic soundness in years to come will be dictated in large measure by our response to an aging America. It is equally apparent that we have not yet fully met the challenge to invest in scientific strategies, to understand and affect human aging, even though that would be the most rational and cost effective response to an aging society.

Americans have witnessed a dramatic rise in life expectancy in this century. Modern science is continuing to increase survivorship with advances in the prevention and treatment of heart disease, stroke, and other pathologies. But in the midst of these successes, we are reminded that the physical condition of the survivors is not in all cases something that we would wish for ourselves and our family members.

So far, we have not found answers to the litany of chronic ailments—Alzheimer's disease, cataracts, parkinson's Disease, deafness, diabetes, arthritis, osteoporosis—that can make the frail elderly wonder if their longevity is worthwhile.

Unless our scientists and medical researchers are supported and given the means to find effective ways to intervene in these and other conditions that afflict the elderly, the numbers of people in costly long-term care will more than quadruple by the middle of the next century.

The Alliance for Aging Research is presently undertaking a formal survey of scientific research areas that may hold clues to understanding human aging. By this summer, we will present an assessment of current aging research, together with forecasts by many of the Nation's foremost scientists, regarding advances in key areas that are likely to occur in coming years.

It is clear that we are moving into a time when intervention, prevention, treatment, and rehabilitation of many of the maladies of old age will be possible. We may even see effective intervention into aspects of the aging process itself. In fact, we believe intervention in human aging is now a legitimate and plausible goal for American science.

In this context, it is difficult to understand the administration's budget proposal for fiscal 1988. Those proposals would reduce the number of new research grants, drain resources from clinical trials in Alzheimer's disease, cut back on education for promising new gerontologists, hamper training in geriatric mental health and reduce personnel at the National Institute on Aging.

Senator PROXMIRE. Would you please summarize in the next minute or so?

Mr. PERRY. Yes, sir.

PREPARED STATEMENT

In our fuller statement, submitted for the record, we have attempted to show the dangers of accepting the status quo for the current level of support for aging research. The demographic imperative of an aging America should compel our science policy to greater urgency.

Thank you very much.

[The statement follows:]

STATEMENT OF DAVID R. CARPENTER

Chairman Chiles and distinguished members of the subcommittee, my name is David R. Carpenter. I am Chairman of the Board of the Transamerica Life Companies, headquartered in Los Angeles, California. I appear before you today as National Chairman of the Alliance for Aging Research. The Alliance is a non-profit, non-partisan, private-sector organization that seeks to advance gerontology and preventive geriatrics in the national interest.

This is an effort that was inaugurated during the last session of Congress. It combines the energies and resources of business executives, leaders of major foundations, several Members of Congress, and some of the top scientists in the nation. Our goal is to broaden the discussion of the "Graying of America" to include a science strategy that could lead to a healthier, more vigorous, independent and self-productive population of older Americans. We are aware of research now underway that could lead to the sort of breakthroughs that will be needed most urgently by the United States and other nations with rapidly aging populations. Therefore it is the mission of our organization -- the Alliance for Aging Research -- to raise the visibility and priority of aging research as a major goal of national science policy.

My testimony today is directed at your examination of what should be appropriate levels of support for the National Institutes of Health. Within the NIH are divisions that carry out essential research in immunology, oncology, cardiology, musculoskeletal diseases, mental illness, hearing and vision impairment -- all areas critical to the health and vitality of the elderly. I direct my remarks also to your consideration of an appropriate level of support for the National Institute on Aging.

I am a trained actuary by profession. But one does not have to be an actuary to know that in the next 50 years the number of people in this country living beyond age 65 will double, and the number of those 85 and over will more than triple. In 1983, for the first time in our history, the number of people over 65 surpassed the number of those under 25 in America. For the next 50 years the elderly population will grow more than four times faster than the rest of the population. Beyond the year 2030 the only significant growth in our population will be in the age group 80 years and older. The oldest group, which presently numbers less than 6 million, will grow to 16 million in 2030 and to 26 million in 2050.

There is no mystery behind the Graying of America. Together with lower birth rates, vastly more of us are surviving into old age which was the province of the fortunate few in the past. We have reason to be thankful for the improvements in public health, sanitation and medical discoveries that have led to an improved standard of living and dramatically higher life expectancies in the 20th Century. And we are grateful that modern science is continuing to push survivorship to new highs with continuing advances in the prevention of heart disease and strokes. But in the midst of these successes, we are reminded that the physical condition of the survivors is not in all cases something we would wish for ourselves.

As a business executive it is clear to me that our nation's social and economic soundness in years to come will be dictated in large measure by our response to an aging America. Most of us are mindful of the steep costs associated with the health care and long term care of an older population, and concerned that those costs could overwhelm public and private resources when the baby boom generation begins to reach retirement age in the next 25 years.

We have succeeded in reducing the incidence of death, or mortality, but have not made subsequent strides in reducing morbidity, the cascade of decline and disability that the very old are heir to. So far we have not found the answers to the litant of chronic ailments -- Alzheimer's Disease, cataracts, Parkinson's Disease, deafness, diabetes, osteoporosis -- that can make the frail elderly wonder if their longevity is worthwhile.

Public officials who have responsibility for the wise use of federal funds must also wonder at the eventual costs to society if further increases in life expectancy are not met with increasingly effective interventions to also reduce morbidity and the need for long term care.

Unless scientists find ways to intervene in the patterns of morbidity, the numbers of people in costly longer term care will more than quadruple by the middle of the next century. Alzheimer's and other dementia's alone, which account for 30% to 50% of the nursing home population, will afflict five times as many people by the year

2040, according to Congress' own Office of Technology Assessment. Without question our scientists will have to discover the cures or means of prevention of the worst aspects of aging, or our society may face devastating consequences.

The Alliance for Aging Research for which I speak today is undertaking a formal survey of scientific research areas that may hold the keys to understanding human aging. Our survey, still in its early stages, already has yielded important markers of forward movement. New insights are emerging almost daily in areas of science that barely existed, or at best were poorly understood, just 10 years ago. We are moving into a time of potential intervention, of prevention, treatment, and rehabilitation of many of the maladies of aging, and even, in some measure, intervention into the aging processes themselves.

Intervention in human aging, long the purview of charlatans and quacks, is now a legitimate and plausible goal of science, propelled by the explosion of new knowlege in immunology, biochemistry, molecular genetics and other life sciences. Our survey is turning up fervent interest by scientists in a dozen different disciplines in pursuing an understanding of the factors that control aging. They are eager to test the hypotheses of conflicting theories of aging, and to move the studies to animals higher on the evolutionary ladder, eventually to humans.

From these studies it is clear that America in coming decades could benefit greatly from increased numbers of healthy, long-lived citizens. It is also possible -- if research does not provide important answers -- that the nation could suffer a loss of profound magnitude. In this context it must be asked whether our commitment to aging research is adequate to our nation's needs.

In fiscal 1987 the NIA has been appropriated $177 million. At that level the NIA remains 10th out of 12 institutes of health by size of budget. Within this level the NIA is expanding the number of Alzheimer's Disease centers at major university medical centers from 5 to 10. The NIA hopes to take advantage of recent discoveries of the genetic basis of at least some forms of Alzheimer's Disease, and to hurry the day when treatments and prevention will be available. Yet, the total Alzheimer's Disease program in the NIA is less than

$50 million while the costs of this disease to the nation approach $40 billion a year.

Similarly, the NIA is making some headway in understanding the causes and possible treatments for osteoporosis. But the amounts available for research are dwarfed when compared to the $7 billion annual cost of hip fractures in the United States each year.

Under the circumstances it is difficult to understand or accept the Administration's rationale for a proposed $11 million cut in the NIA budget for fiscal 1988. The Alliance for Aging Research understands that Congress rejects the Administration's budget and also its plan for spreading 1987 appropriated funds well into fiscal 1988. Our organization lauds those in Congress who resist approaches to the budget that could dampen the pace of scientific discovery just when the opportunities for progress in critical areas are in view, and when the consequences for failing the move ahead are so dire.

We applaud you for rejecting the counsel to turn back the clock in research that could pay society such handsome dividends. We also urge the members of this committee to prevail over a strict hold-the-line approach toward aging research in the coming fiscal year. We believe you should not accept status quo for the current level of support for aging research. The demographic imperative of an aging America should compel our science policy to greater urgency.

Thank you.

Senator PROXMIRE. Thank you, Mr. Perry, very much for your testimony.

There is a rollcall vote going on now, but I think we can hear one more witness before I leave. I am going to have to leave and then come back.

STATEMENT OF WILLIAM N. KELLEY, M.D., PRESIDENT, AMERICAN RHEUMATISM ASSOCIATION

Senator PROXMIRE. Our next witness will be Dr. William Kelley, American Rheumatism Association.

Let me say that I may have to interrupt you. I have not missed a vote in 21 years, and I don't want to miss this one. I will wait for the 5 minute bell.

Dr. KELLEY. All right, sir. You won't miss it.

I am William N. Kelley, president of the American Rheumatism Association and also the John G. Searle professor of medicine and chairman of the Department of Internal Medicine at the University of Michigan, in Ann Arbor.

With 4,500 members, the American Rheumatism Association is the world's largest professional society of rheumatologists and scientists, who specialize in the care and study of patients with arthritis and related diseases.

More than 37 million people suffer from arthritis in this country alone.

On behalf of our membership, I wish to carry two messages to you today.

First, the members of the American Rheumatism Association wish to thank the members of this subcommittee for their past support of the National Institutes of Health. Today, we especially wish to thank you for raising the ceiling of the budget resolution for the health function so that your committee can properly consider the needs of the NIH for fiscal year 1988.

You have made a wonderful investment in the support of the health of the American people.

The future is bright, and we believe future investment in the NIH will continue to be rewarding.

This brings me to the second point.

This year marks the centennial celebration of the NIH. Allocation of $6.84 billion for fiscal 1988, would only maintain the current services of the NIH. We hope this is the minimal level you would consider acceptable.

But I am here today to request that you consider some enhancement of the NIH budget for next year. Since this is the centennial celebration of the NIH, it seems appropriate to us that Congress recognize the overall contributions of this remarkable institution by providing $7.45 billion for fiscal year 1988, to be spread across all NIH institutes and mechanisms.

Understandably, the members of our professional society have a very special interest in the care of patients with arthritis, and very much support the new NIAMS. Accordingly, we ask you to consider identifying $196 million for this institute for fiscal year 1988.

We recognize that this request comes at a time when Congress must cope with very serious budget constraints.

Nevertheless, I call your attention to the fact that, despite excellent support in the past, expenditures for health, research, and development in the past two decades have dropped from 2.7 percent of all health care expenditures, to 1.5 percent.

In addition, Federal funds for health, research, and development are now only 12 percent of Federal funds provided for all research and development, as compared to 13.8 percent a decade ago.

Hence, despite the monumental benefits of your investment, support for the NIH has slipped.

PREPARED STATEMENT

We encouage you to reverse this erosion and to adopt an NIH budget of $7.45 billion for fiscal year 1988.

Thank you very much for this opportunity.

[The statement follows:]

Statement of William N. Kelley

Good Afternoon. The American Rheumatism Association very much appreciates the opportunity to testify this afternoon. I am William N. Kelley, President of the American Rheumatism Association and also the John G. Searle Professor of Medicine and Chairman of the Department of Internal Medicine and Professor of Biological Chemistry at The University of Michigan in Ann Arbor. With 4,500 members, the American Rheumatism Association is the world's largest professional society of Rheumatologists and scientists who specialize in the care and study of patients with arthritis and related diseases. More than 37 million people suffer from arthritis in this country alone. For more than 50 years, members of the American Rheumatism Association have maintained a strong commitment to research and to treatment of patients with these diseases.

On behalf of our membership, I wish to carry two messages to you today. First, the members of the American Rheumatism Association wish to thank the members of Congress for their past support of the National Institutes of Health. The monumental improvement in the health of the American people is due largely to this support, which has fostered the formation and expansion of the NIH to its current level of success. We take great pride in the success of programs supported by the NIH and in the worldwide leadership role which we, as practitioners and academicians, are able to take in applying new knowledge to the care of our patients. You have made a wonderful investment in support of the health of the American people. All of us, not just our patients, have benefited from that.

In addition, the future is bright. Recent discoveries have provided clear evidence of an infectious cause of certain types of arthritis, and this has allowed the development of curative therapy. There is now increasing evidence for a viral etiology of some of the other major diseases of direct interest to us. In addition, NIH-supported scientists now are defining at the molecular level the ways in which certain individuals are susceptible to these diseases. Finally, we are optimistic that human gene therapy may provide not only an alternative approach to treatment, but also the cure of some of these diseases at some point in the future. Thus, we believe future investment in the NIH will continue to be rewarding. This brings me to the second point.

This year marks the Centennial celebration of the NIH. Allocation of $6.84 billion for fiscal 1988 would only maintain the current services of the NIH. We hope this is the minimal level which you would consider acceptable. But, I am here today to request that you consider some enhancement of the NIH budget for next year. Since this is the

Centennial celebration of the NIH, it seems appropriate to us that Congress recognize the overall contributions of this remarkable institution by providing $7.45 billion for FY 88 to be spread across all NIH Institutes and mechanisms. This level of funding would allow an award rate of 38% for all new and competing investigator-initiated grants as well as a real increase in research training and career development awards, where serious shortages continue to exist, particularly for the clinical investigator, and hopefully also for the Clinical Research Centers.

Understandably, the members of our professional society have a very special interest in the care of patients with arthritis and very much support the new National Institute of Arthritis, Musculoskeletal and Skin Diseases. First, we believe that a substantial increase in support for all of the NIH also will benefit our Institute. In addition, we recognize that it is impossible to predict exactly the scientific disciplines where the major break-throughs important to our patients will occur. Based on this realization, we ask you to consider identifying $196 million for the NIAMS for FY 88.

We recognize that this request comes at a time when Congress must cope with very serious budget constraints. Nevertheless, I call your attention to the fact that, despite excellent support in the past, expenditures for health research and development in the past two decades have dropped from 2.7 percent of all health care expenditures to 1.5 percent. In addition, federal funds for health research and development are now only 12 percent of the federal funds provided for all research and development, as compared to 13.1 percent a decade ago. Hence, despite the monumental benefits of your investment in the NIH, this institution appears to have been less successful than other branches of government in maintaining support for its research and development programs.

We of the American Rheumatism Association encourage you to reverse this erosion in health research and development. This, the Centennial year of the NIH, is the time to begin this correction. We encourage you to adopt an NIH budget of $7.45 billion for FY 88 in recognition of the tremendous potential benefit this will bring to the health of the American people.

Thank you.

Senator PROXMIRE. Thank you very much, Dr. Kelley. We appreciate the concise way you have presented your testimony.

I am going to ask Dr. Mankin, Barbara Matia, Dr. Cooper, Pamela Davis, and Dr. Myron Genel to wait a few minutes, if they can. That is the 5 minute bell that you now hear, and I will go to the floor to vote.

I will be right back.

[A brief recess was taken.]

Senator PROXMIRE. I understand that in my absence, a poll was taken and it was agreed that Pamela Davis would go next.

I don't know who voted, but I was just told that by the staff.

Ms. Davis, you have been elected. You are Miss America right now.

STATEMENT OF DR. PAMELA BOWES DAVIS, COCHAIRMAN, PUBLIC POLICY COMMITTEE, AMERICAN FEDERATION FOR CLINICAL RESEARCH

Dr. DAVIS. Yes; for a while.

Mr. Chairman, I am Dr. Pamela Davis, and I am here today on behalf of the American Federation for Clinical Research, or the AFCR.

I am currently the Chief of the Pediatric Pulmonary Division at Rainbow Babies and Children's Hospital in Cleveland, OH, and I am associate professor of pediatrics and medicine at Case Western Reserve University School of Medicine.

I would like to thank the members and staff of your distinguished committee for your clear appreciation of the vital role of biomedical research in maintaining the health of the American people and the wonderful record of NIH appropriations which you have amassed.

AFCR scientists are especially grateful for your persistent efforts to thwart the yearly attempts to limit the NIH budget, especially in the face of this year's plan by OMB not to spend $334 million of the fiscal 1987 appropriation.

In addition, I would like to thank the Senate, and especially Senators Weicker, Kennedy, Heinz, and Inouye, for their efforts to raise the ceiling for the health function in the Senate budget resolution so that this Appropriations Committee can properly address the needs of the biomedical research community in fiscal 1988.

The AFCR represents 12,000 physical investigators working in our Nation's medical schools and in intramural NIH. Members of the AFCR are actively engaged in research in Alzheimer's disease, diabetes, hypertension, cancer, AIDS, kidney failure, emphyzema, stroke, heart disease, and the illnesses of childhood. So we do not represent a single constituency, but consist of scientists in all areas of biomedical research.

These younger scientists represent the future of research in this country. We were trained with NIH research training funds, and we hold NIH RO1 research grants.

For fiscal 1988, we strongly urge you to seriously consider the recommendations of the ad hoc group for medical research funding, of which the AFCR is a charter member.

First, a current services budget of $6.842 bilion would enable us to continue our present level of effort and support the present number of research trainees and research grantees.

Current services will require an 11-percent increase over fiscal 1987, because each year, scientific research requires ever more sophisticated research equipment and more highly skilled research personnel. But, more importantly, a growth budget of 9 percent above current services, to $7.452 billion, would permit us to capitalize on the potential for creative research, which has not been possible hitherto, because of budgetary constraints.

At the present level of investment, a number of young, well-trained scientists, who have submitted grant applications for excellent research projects, cannot be funded.

An appropriation of $7.45 billion for fiscal 1988 will enable us to do several things. First is to expand our massive research effort to combat and control AIDS; to achieve a funding level of only 38 percent of approved applications; to increase our current research training effort to 12,500 trainees, especially critical in the area of physician investigators, a species still on the endangered list; and to fund research support facilities, such as instrumentation grant programs, research animal facilities, and most important, the general clinical research centers.

AFCR physician investigators are the major users of these GCRC's. We conduct the human subjects research, which takes place in these centers, with their controlled environments and skilled personnel. We appreciate these resources.

The ad hoc recommendation would meet the fiscal 1988 need of this program for an appropriation of $110 million, which does represent a large increase over the fiscal 1987 appropriation.

Senator PROXMIRE. Dr. Davis, could you please summarize.

Dr. DAVIS. Yes, sir; it is really the level that is required to support the program adequate level achieved in fiscal 1985. We consider this a vital resource in an era of shrinking funds and in an area of increased research demand.

In conclusion, I do thank you for the chance to explain our view, the needs of the biomedical research community, and thank you for your past support. It has been a privilege for our scientists to work with you in partnership to advance the health of Americans.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very much, Dr. Davis.

We very much appreciate your fine testimony.

[The statement follows:]

STATEMENT OF PAMELA BOWES DAVIS

The American Federation for Clinical Research (AFCR) is the scientific society representing over 12,000 clinical investigators in this country. Many distinguished medical scientists such as Drs. Joseph Goldstein and Michael Brown, winners of the 1986 Nobel Prize in Medicine, are senior members of the AFCR. Active members must be under age 41 and more than 5000 such young scientists pursue careers in medical research at our nation's medical schools and research institutes. These AFCR members represent the future of clinical investigation in this country and most rely heavily upon NIH funding for their research training and later for the research grants under which they conduct their studies. AFCR members represent all the subdisciplines of medicine and aspire to discover the cause and treatment of many of the most common illnesses affecting our citizens, from cancer to heart disease, AIDS, diabetes, stroke, kidney failure and Alzheimer's disease. Federal funding for biomedical research through the National Institutes of Health (NIH) is vital to this effort and our active physician investigators are supported by extramural investigator-initiated grants and center grants from all institutes at NIH. Some members are scientists in the NIH intramural research programs.

The AFCR recognizes the vital role of Congress in providing support for the NIH research effort and especially the leadership of the Senate Appropriations Committee in insuring that biomedical research support continues to be a major priority of government funding, as it is of the American people. Your generous appropriations in recent years, as well as your stalwart support in rejecting the repeated efforts of this Administration to limit federal investment in medical research, and refusing to permit OMB, by various ploys, to avoid spending the full Congressional appropriations, have been much appreciated by the scientists who receive NIH support in their struggles to unravel the mysteries of nature and human disease.

We must continue this noble and productive effort and again in fiscal 1988, must look to your committee to judge the need and support medical research funding as a high priority of Congress. The AFCR is a member of the Ad Hoc Group for Medical Research Funding and wishes to commend for your serious consideration their budget recommendations for NIH for FY88. First, to maintain the current level of scientific effort, to continue to support the present number of scientists, research trainees and research project grants in the NIH extramural portfolio will require a budget of $6.842 billion in FY88, an 11 percent increase over this year's budget. This increase would keep the number of individual-investigator grants at the level achieved in each of the last 3 years with your generous support and it would meet the anticipated increases in costs per grant occasioned by the increased sophistication of modern research with its attendant demands for more expensive equipment and more highly trained personnel.

Howver, this increase alone would not enable the medical research enterprise to grow and to maximize the potential for discovery in biomedical research which is the deserved fruit of our recent investment. Rather, the time is ripe for a greater investment in research. The system is in place, a cadre of well-trained young people are submitting grant applications for excellent research projects which cannot be funded at the present level of investment and certain aspects of the enterprise continue to be chronically underfunded. Funding to the level of $7.452 billion in FY88, an increase of 9 percent above current services, would enable us to:

1. expand to the massive research efforts necessary to achieve control over the AIDS epidemic which is sweeping the country

2. achieve a funding level of 38 percent of approved grant applications at full study section recommended levels, thus

taking better advantage of the pool of promising scientific ideas submitted to NIH each year.

3. expand our research training effort, especially in the critical areas of physician investigators--a species which is still on the endangered list. The future of research is in this effort. The training period is at least a decade after college, and both high calibre research training and the prospects of grant support for a career as a physician investigator must be visible to young people to persuade them to embark on this career path. The Ad Hoc request for FY88 would enable us to support 12,500 research trainees.

4. Support facilities beyond those provided to the individual investigator in his grant which are vital to successful research. Such support services range from increased instrumentation grant programs to research animal facilities to funds to renovate outmoded laboratory space. Perhaps most critical to clinical research is a vastly underappreciated resource provided by the Division of Research Grants -- the General Clinical Research Center (GCRC). AFCR members conduct research at the 78 GCRCs located in 56 of our medical schools and teaching hospitals. They use these facilities for inpatient studies and outpatient protocols funded by their R01 grants; in the controlled environments and with the skilled personnel provided by these Centers, advances in human subjects research take place daily. The GCRC program needs a substantial increase in the FY88 budget. Support for this vital resource has eroded, seemingly without adequate attention, over the last 3 years. It is now not able to support research at a level even equal to that achieved in FY85. The Congressional appropriation was frozen in FY86 and then further cut by Gramm-Rudman, and a small increase in FY87 did not restore the full capability of these Centers. At the same time, an important source of revenue supporting this

program, reimbursements from third party payors for mixed use days of care in GCRC beds, has fallen away from a yearly revenue of nearly $12 million in FY82 to an anticipated $8.9 million this year. To achieve the current services level of FY85 in FY88 will require a budget of approximately $125 million and a Congressional appropriation of at least $110 million. This budgetary increase is provided in the overall Ad Hoc Group recommendation of $7.452 billion. A rigorous analysis of the GCRC program would indicate that even a current services level in FY88 is not enough, since an FY85 base is used. The GCRCs are unique among all NIH centers programs in that they support the work of individual R01 investigators and their research grants. This group has grown in size under the aegis of your committee by 24 percent since FY85. Surely the GCRC program needs to grow above current services ($110 million) to remain a useful research resource for these investigators. We recommend $115 million for FY88.

In summary, the AFCR requests that the Senate Appropriations Committee not only continue its vital role in providing a current services budget for NIH in FY88, despite the President's woefully inadequate request for $5.5 billion, but that the Committee give serious consideration to our plea that additional investment is warranted. The high priority which biomedical research and efforts to improve health hold in the minds of the American people make medical research funding an appropriate and urgent investment of our scarce federal dollars. Congress can also be assured that the magnificent system of research which you have created in the NIH is ready at a moment's notice to absorb a significant increase in research funding and spend the money wisely, since the system maintains a ready reserve of research which has already passed stringent review for scientific merit. Thank you for your attention to this vital federal program. It has been a privilege for AFCR scientists to work in partnership with you and your Committee in our joint efforts to advance science and improve human health.

STATEMENT OF HENRY J. MANKIN, M.D., MEMBER, NATIONAL ARTHRITIS ADVISORY BOARD

Senator PROXMIRE. Our next witnesses are Dr. Henry Mankin and Maureen Drummy.

Dr. MANKIN. Let me say that Maureen is not here today.

Senator PROXMIRE. OK. Fine.

Dr. Mankin, you represent the National Arthritis Advisory Board. Go right ahead, sir. We are happy to have you here today.

Dr. MANKIN. That is correct, sir. I am a professor of orthopedic surgery at Harvard Medical School and chief of the orthopedic service at the Massachusetts General Hospital.

Senator PROXMIRE. It is an honor to have you here.

Dr. MANKIN. I am a member of the National Arthritis Advisory Board.

Arthritic and related musculoskeletal disorders devastate lives. They are this Nation's No. 1 crippler, the leading cause of diminished mobility, the second leading cause of activity limitation, and a significant cause of death.

In addition to the approximately 37 million Americans who are afflicted with such disorders as osteoarthritis, rheumatoid arthritis, and lupus, millions more have musculoskeletal conditions, such as osteoporosis, sports injuries, low back pain, and fractures.

Approximately one-third of our population is afflicted by some form of musculoskeletal disability.

The economic burden of arthritis and musculoskeletal disease is large. The total costs incurred by conventional forms of arthritis approach $9 billion a year. Osteoporosis and related complications add another $6 billion. And back pain and lumbar disc disorders account for approximately $16 billion.

We currently stand on the threshold of great discovery. Perhaps the most potent research tools which have ever been available are the enormously powerful techniques of molecular biology, which now enable scientists to define cellular synthetic processes, identify with infinite purity the products of that synthesis, and, even depending on the circumstance, alter the way the cell acts.

We should, if adequately funded, be able to use these and other techniques to search for one of the infectious causes of rheumatoid, investigate defects in the immunologic network in lupus, enhance our efforts to define the structure, biochemical and metabolic changes in cartillage in osteoarthritis, develop new and precise means of early detection of osteoporosis, and optimal regimens for hormonal and mineral management, continue research in materials and designs of the metallic total joint implants, with special emphasis on bony in-growth, and identify mechanisms to define and prevent and more effectively treat sports-related and other forms of injury to bones, joints, muscles, ligaments, and especially the low back.

We currently are able to support only 25 percent of these exciting proposals. The board recommends that the NIAMS receive increased funding to $212 million, in order to support 50 percent of approved competing individual research applications.

In order to maintain the high quality of arthritis and musculoskeletal disease research and to insure a continuing supply of new investigators in the field, the board recommends funds inclusive in the $225 million to implement fellowships and career development awards to new and experienced investigators and also to medical students, to learn the latest techniques of molecular biology and other biotechnologies.

Thank you for the privilege of appearing before this committee.

Thank you.

PREPARED STATEMENT

Senator **Proxmire**. Thank you, Doctor, for excellent testimony. We very much appreciate it.

[The statement follows:]

STATEMENT OF HENRY J. MANKIN

I am Henry J. Mankin, Edith M. Ashley Professor of Orthopaedic Surgery, Harvard Medical School, Chief of the Orthopaedic Service of the Massachusetts General Hospital, and a member of the National Arthritis Advisory Board. I am honored to have the opportunity to appear before you to present the recommendations of the National Arthritis Advisory Board (NAAB). Congress established the NAAB in 1976 to: (1) Evaluate the implementation of the National Arthritis Commission's Arthritis Plan and (2) report annually to the Congress and the Administration with recommendations for future policies, programs, and budgetary requirements related to arthritis.

Arthritis devastates lives. Arthritic and related musculoskeletal disorders are this country's number one crippler, the leading cause of diminished mobility, the second leading cause of activity limitation, and an important cause of mortality. Approximately 37 million Americans are afflicted with one of the more than 100 arthritis-related disorders--including osteoarthritis, rheumatoid arthritis, and lupus—and millions more have musculoskeletal conditions such as osteoporosis. Approximately one-third of our population is afflicted by joint swelling, limitation of motion, or musculoskeletal pain.

Although the prevalence of arthritis and other musculoskeletal problems increases with age, these conditions also affect more than 165,000 children. Arthritis in children can cause pain, swelling, and deformity. It can retard growth and lead to blindness, kidney disease, or death.

The economic burden of arthritis and musculoskeletal diseases is also large. The total costs incurred from conventional forms of arthritis approach $9 billion a year. Osteoporosis and related complications add another $6 billion in annual costs, and back pain and lumbar disk disorders account for an additional $16 billion. As the proportion of our elderly population increases over the next 50 years, these costs are projected to increase dramatically.

The cause or causes of most forms of arthritis are not yet known. There are no known cures and few proven preventive methods. However, the accomplishments of the past decade offer significant hope that the enormous human costs and economic burden associated with these diseases can be significantly reduced.

Unfortunately, the future of many of these programs is threatened by inadequate levels of Federal support, and the Board is deeply concerned that the momentum that has been generated will be lost if additional resources are not allocated to its fulfillment.

Budget Recommendations for NIAMS

The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) is the lead agency for arthritis, musculoskeletal, and skin-related research activities. This new Institute requires the continued support of Congress to achieve the goals of the national plan for these diseases. The following table summarizes the Advisory Board's budget recommendations for NIAMS, which are described in futher detail below:

	1987 Recommended	1987 Appropriation	1988 Recommended
Research Project Grants	$120,817	$ 94,368	$148,587
Multipurpose Arthritis Centers	16,275	10,040	15,113
Specialized Centers of Research	8,080	8,130	8,746
Research and Development Contracts	5,108	3,027	6,442
Intramural Research	9,584	8,422	10,321
Research Career Awards and Other Research	7,800	5,934	8,256
National Research Service Awards	6,530	6,433	9,495
Research Management & Support	6,354	4,542	5,300
	$180,548	$140,896	$212,260

Individual Research Grants

Scientific advances have opened up several research opportunities that strongly merit funding through additional research grants. Examples of these important opportunities are highlighted below.

Perhaps the most potent research tools that we have ever had available are the enormously powerful techniques of molecular biology, which enable scientists to define cellular synthetic processes; identify, with infinite purity, the products of that synthesis; and even, depending on the circumstances, alter the way the cell acts. Techniques of molecular biology are now being applied with great success to the study of a number of diseases. This science has dramatic and exciting implications for the study of arthritis and musculoskeletal diseases, and the Board has identified the following as areas of research that would benefit rapidly from the application of molecular biology techniques:

- o The identification of possible genetic markers for connective tissue diseases that would enable early diagnosis and treatment.

- The analysis of substances that are produced or inhibited at the site of disease-related tissue destruction and their relationship to gene activity.

- Investigation of the genetic structure and regulation of collagens because abnormalities in these connective tissues may be an early warning sign of disease.
- Continued investigation of human growth factors as mediators and their possible link to arthritis-related diseases.

Other exciting and promising research opportunities include:

- An intensive search for one or more infectious etiologies in rheumatoid arthritis and other forms of inflammatory arthritis.
- Expanded research into the role of growth factors, cytokines, and other intercellular mediators in the development of arthritis and collagen-vascular disorders and diseases of bone.

- Investigation of defects in the immunologic network in patients with lupus and other autoimmune diseases to foster development of specific interventions to arrest and even reverse these diseases.

- Enhanced efforts to define the structural, biochemical, and metabolic abnormalities in articular cartilage associated with osteoarthritis.

- Development of new precise means of early detection of osteoporosis and optimal regimens for hormonal and mineral management.

- Continued research in materials and design of metallic total joint implants, with special emphasis on bony ingrowth systems.

- Identification of mechanisms to monitor causes of sports-related injuries and strategies to prevent such injuries to joints, muscles, and ligaments.

- Exploration into the role of mediators and physical factors in the healing of fractures.

- Research to determine how chronic inflammatory joint diseases in children affect the growth plate to cause short stature and the influence of nutritional density on bone density.

Because of the potential of these exciting areas of research, the Board recommends that the NIAMS receive sufficient funds to support 50 percent of approved competing individual research applications.

Research Training

To maintain the high quality of arthritis and musculoskeletal disease research and to ensure a continuing supply of new researchers in the field, the Board recommends NIAMS receive additional funds to implement:

- o Fellowships and career development awards to teach beginning rheumatologic and orthopedic investigators the latest techniques of molecular biology and biotechnology.
- o Special fellowships to enable established rheumatologic and musculoskeletal disease investigators to expand their knowledge of molecular biology and biotechnology.
- o Special granting mechanisms to enable medical students to engage in research of rheumatologic and musculoskeletal disease.

Centers

Nine new multidisciplinary Specialized Centers of Research (SCOR's) were authorized in fiscal year 1987; three each in the areas of rheumatoid arthritis, osteoarthritis, and osteoporosis. These centers are an important addition to the arthritis research program. The Multipurpose Arthritis Centers have also contributed significantly to the national arthritis program by engaging in comprehensive biomedical and epidemiological research, training and education, and community and health services. Over the past 8 years, however, the number of MAC's has decreased and the budget of each center has been reduced 15 to 20 percent, threatening the effectiveness of MAC programs. The NAAB recommends that all centers be fully funded and at least two additional multipurpose centers in arthritis and musculoskeletal diseases be established within the next year.

Thank you for the privilege of appearing before your subcommittee. I will be pleased to respond to any questions you may have.

STATEMENT OF BARBARA MATIA, SCOTTSDALE, AZ

Senator PROXMIRE. Next is Barbara Matia of Paradise Valley, AZ.

Ms. Matia, we are glad to have you here.

Ms. MATIA. Senator Proxmire and staff, the only thing worse than having rheumatoid arthritis yourself is learning that your 10 year old daughter has rheumatoid arthritis as well.

My daughter's story and mine parallel one another, only I did not learn of Dr. Brown's treatment program, which is based upon the infectious theory of rheumatoid arthritis, until my adult life and until after I was bedridden with arthritis.

My arthritis began as a very young child, just as my daughter's has. We had symptoms which Dr. Brown believes are part of rheumatoid arthritis—pain, weakness, fatigue, anemia, lack of memory, inability to concentrate, irritability and depression. Our mental acuity was affected.

Thanks to the antibiotic treatment program, we are both alert, our symptoms have improved, and we are feeling much better, rather than just coping with life.

There are two significant questions which can no longer be left unanswered because the answers to these questions could bring hope to the 37 million arthritics in our country.

First, what is Dr. Brown doing to detect rheumatoid arthritis that permits him to diagnose it earlier than the diagnosis achieved through the standard blood tests for rheumatoid arthritis?

One test he uses that is not used anywhere else in the country is a mycoplasma antibody test. A positive mycoplasma antibody test indicates that appreciable levels of mycoplasma are present.

The second question that can no longer be left unanswered is why, if the antibiotic treatment program is so significant, that it allow the arthritic sustained control and even a reversal of the disease, is this treatment program not spreading across our country like hotcakes? It is because the source of the infection has not been confirmed. And there is a very definite reason why this has not happened.

First, the micoplasma organism is hard to grow in culture or to demonstrate on a regular basis outside of the body.

Second, the discovery of cortisone blocked the infectious theory for decades. Everyone thought the cure was at hand. Years of research went into purifying cortisone, to try to eliminate its terrible side effects.

It has since been discovered that cortisone blocks the body's immune system reaction, but does nothing to stop the progress of the disease. But all those years were lost.

Third, while interest in the infectious theory returned in the late 1960's, that interest was snuffed out as a result of the Boston study of tetracycline, as a treatment for rheumatoid arthritis. Although it is acknowledged today that the study was improperly formulated, the study showed no effect from the tetracycline and the medical community has been reluctant to revisit the infectious theory ever since.

Finally, because of lack of funding for research into the infectious theory for reasons set forth above, Dr. Brown pursued the treatment program for the disease based on his belief that the cause was an infectious agent.

Therefore, while Dr. Brown has an important lead that the infectious agent is the case, most rheumatologists refuse to try antibiotic treatment program, where the infectious agent is not confirmed, even though they are willing to give cortisone and other accepted remedies before any cause is confirmed.

Thank you.

PREPARED STATEMENT

Senator PROXMIRE. Thank you very much, Ms. Matia. We will certainly call this to the attention of Chairman Chiles and to the ranking member, Senator Weicker. This is interesting testimony and we are very grateful to you.

Ms. MATIA. Thank you very much.

[The statement follows:]

STATEMENT OF BARBARA MATIA

I am Barbara Matia of Scottsdale, Arizona.

The only thing worse than having rheumatoid arthritis yourself is learning that your daughter has rheumatoid arthritis as well. My daughter's story and mine parallel one another, only I did not learn of Dr. Brown's treatment program, which is based upon the infectious theory of rheumatoid arthritis, until my adult life and until after I was bedridden with arthritis. My arthritis began as a very young child with my first flare beginning in my jaws. I had all the symptoms which Dr. Brown believes are a part of rheumatoid arthritis--pain, weakness, fatigue, anemia, lack of memory, inability to concentrate, irritability and depression. My mental acuity was affected.

I truly lived a half life, yet no doctor was able to diagnose my disease. It was not until my daughter's birth that I was diagnosed as having severe rheumatoid arthritis.

Two years ago I took my daughter to the pediatrician because she had not been feeling well for some time. The doctors thought my daughter might have mononucleosis, valley fever or arthritis, but nothing showed up on her blood test, even after several tests. However, her symptoms persisted and she developed nodules on her wrist. To my pediatrician's credit, he was more than willing to send her blood work to Dr. Brown at the Arthritis Institute in Arlington, Virginia. Dr. Brown called me several days later to tell me that Bethany had active rheumatoid arthritis. If it were not for my having the disease and understanding all of the symptoms, Bethany's arthritis might not be diagnosed today. She was in the hospital at this time last year for her first treatment with intravenous antibiotics, followed by oral antibiotics at home.

All of her symptoms have improved. She is alert and feeling much better rather than just coping with life.

Bethany's and my story are not unique. I cannot begin to tell you how many patients are sent to the Arthritis Institute who could not be diagnosed by their physician or rheumatologist.

There are two significant questions that can no longer be left unanswered because the answers to these questions could bring hope to the 37,000,000 arthritics in our country.

First, what is Dr. Brown doing to detect rheumatoid arthritis that permits him to diagnose it earlier than the diagnoses achieved through the standard blood tests for rheumatoid arthritis? One test he uses that is not used elsewhere is a mycoplasma antibody test. A positive mycoplasma antibody test indicates that appreciable levels of mycoplasma are present. Under Dr. Brown's theory of the disease, appreciable levels of mycoplasma would suggest that rheumatoid arthritis is developing. The fact that these early diagnoses are later confirmed by the more widely used tests for rheumatoid arthritis would in itself suggest a connection between mycoplasma and rheumatoid arthritis. But whether or not this is the case, the test has proven to be a reliable early indicator of rheumatoid arthritis.

The second question that can no longer be left unanswered is why, if the antibiotic treatment program is so significant that it allows the arthritic sustained control and even a reversal of the disease, is the treatment program not spreading across our country like hotcakes? It is because the source of the infection has not been confirmed. And there are very definite reasons why this has not happened.

First, while Dr. Brown isolated the mycoplasma organism in 1937 and has done so intermittently since then, the isolation of the organism on a regular basis is difficult. It is also hard to grow in culture or to demonstrate on a regular basis outside of the body. Therefore, it will take years of further research to fully understand the workings of the infectious agent.

Second, the discovery of cortisone blocked the infectious theory for decades. Everyone thought the cure was at hand. Years of research went into purifying cortisone to try to eliminate its terrible side effects. It has since been discovered that cortisone blocks the body's immune system reaction but does nothing to stop the progress of the disease. But all those years were lost.

Third, while interest in the infectious theory returned in the late 1960's, that interest was snuffed out as a result of the Boston Study of tetracycline as a treatment for rheumatoid arthritis. Although it is acknowledged today that the study was improperly formulated, the study showed no effect from the tetracycline and the medical community has been reluctant to revisit the infectious theory ever since.

Finally, because of lack of funding for research into the infectious theory for the reasons set forth above, Dr. Brown pursued the treatment program for the disease based upon his belief that the cause was an infectious agent.

Therefore, while Dr. Brown has an important lead that an infectious agent is the cause, most rheumatologists refuse to try the antibiotic treatment program where the infectious agent is not confirmed even though they will give cortisone and other "accepted" remedies before any cause is confirmed.

Dr. Brown's fifty years of research and clinical experience make him the most knowledgeable doctor in the country today with respect to the infectious theory of rheumatoid arthritis. Dr. Lawrence Shulman, Director of the new Arthritis Institute of the National Institutes of Health, has said "Dr. Brown has made his mark with the antibiotic treatment program." While that statement represents significant progress, there has still been no action to make the antibiotic treatment program available to the nation's arthritics.

In 1983, when I first testified before this subcommittee, I quoted to you from a 1972 statement of the then head of the NIADDK that "heartening progress was being made in determining the cause of rheumatoid arthritis." Four more years have now gone by and from the standpoint of the rheumatoid arthritic, nothing new has been offered them except methatrexate which can have results worse than the disease. Four times this subcommittee has asked the NIADDK to take positive steps to explore the antibiotic treatment program of the Arthritis Institute. Twice during that period the NIADDK turned down a grant application to fund a clinical trial of that program.

After the experience I have had with my daughter, I am convinced now more than ever that the arthritic does not have to live a half life and that a treatment program to return the other half of life to the arthritic is currently available. This subcommittee can make the difference!

STATEMENT OF BETHANY MATIA

I am Bethany Matia and I am 12 years of age.

What is arthritis? Who gets arthritis? How do you know when you have arthritis? Is there a cure for arthritis?

Since my mother was in bed sick with arthritis when I was learning to talk, one of my early questions was will I get arthritis when I grew up?

The question was answered for me last year when I was diagnosed as having active rheumatoid arthritis. I have been hospitalized twice during the year.

When my mother took me out for ice cream and told me I had arthritis--I didn't believe her. The symptoms are hard to understand. No one wants to be different. I always thought I had a headache, the flu and that I was just tired. I slept most days after school and I was not able to handle my school work in fifth grade. I have been treated with nothing but antibiotics this year. My symptoms have all improved and so have blood tests as well as my school grades.

My disease would not be diagnosed if it weren't for my mother and for Dr. Brown. I hope that my visit today will interest you in the infectious theory for arthritis, so that we can help all the children that are in the early stage of arthritis and don't even know they have the disease.

STATEMENT OF REGINALD COOPER, M.D., PRESIDENT, AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Senator PROXMIRE. Our next witness is Dr. Reginald Cooper, American Academy of Orthopaedic Surgeons.

Dr. COOPER. Thank you, Senator.

I am also chairman of the Department of Orthopaedic Surgery at the University of Iowa Hospitals and clinics.

As I am sure you are aware, Mr. Chairman, the diseases and disorders of the musculoskeletal system rank among the most common causes of pain, disability, and disfigurement.

Apart from the toll they exact in human suffering, the economic impact of these disorders exceeds $65 billion annually, when measured in terms of medical costs and lost productivity.

You have heard about the 31 million Americans who suffer arthritis, including the wear and tear arthritis, osteoarthritis. You have heard just now about rheumatoid arthritis. You have heard from Dr. Mankin about the promises for cures. For these disorders we have operations now to give symptomatic relief, such as total joint replacement, but we need much, much more basic research before we really find the answers to these disorders.

Moving on to the disorders of bone, you have heard about osteoporosis and perhaps know that after 75 years of age, this disorder, where bones demineralize, can be demonstrated in 9 out of 10 women and 70 percent of all the fractures occurring in women over 45 are related to osteoporosis.

We are extremely grateful for the support that you have given us in the past, including the support for our specialized centers of research, also for helping form the new Institute for Arthritis, Musculoskeletal and Skin Diseases.

We believe that the substantial funds that you have helped us get in the past several years have been very important to the patients involved with musculoskeletal disorders, but the President's budget for 1988 does not begin to meet the needs of the biomedical research community.

Therefore, we respectfully urge this committee to provide $196 million for the National Institute of Arthritis, Musculoskeletal and Skin Diseases. On behalf of the over 12,000 members of the American Academy of Orthopedic Surgeons, I want to thank you for your past support and urge you to continue to increase this support in the future.

Thank you for listening to me.

PREPARED STATEMENT

Senator PROXMIRE. Thank you, sir, for your fine, concise testimony.

[The statement follows:]

STATEMENT OF REGINALD COOPER

I am Reginald R. Cooper, M.D., Chairman of the Department of Orthopaedic Surgery, University of Iowa Hospitals and clinics, and President of the American Academy of Orthopaedic Surgeons.

I am pleased to appear before you today to present the Academy's position on the need for continued and, if possible, expanded funding of research on the musculoskeletal system.

The musculoskeletal system encompasses the muscles, bones, joints, tendons, and ligaments that enable each of us to perform the tasks of everyday living. It also provides support and protection for the other systems of the body. It constitutes more than 70 percent of the body and includes the spine and extremities.

As I am sure you are aware, Mr. Chairman, diseases of the musculoskeletal system rank among the most common causes of pain, disability, and disfigurement. Apart from the toll they exact in human suffering, the economic impact of these disorders exceeds $65 billion annually, when measured in terms of the added costs of medical care and lost productivity.1/

Mr. Chairman, approximately 31 million Americans suffer from arthritis, a disease that encompases more than 100 different disorders of the joints and connective tissues, including osteoarthritis, rheumatoid arthritis, systemic lupus erythematosus, gout, and ankylosing spondylitis, or what is commonly know as spinal arthritis. Additionally, more than 40 million people suffer from bone and joint disorders, fractures, and injuries of the tendons and ligaments.

1/The Frequency of Occurrence, Impact, and Cost of Musculoskeletal Conditions in the United States. Troy L. Holbrook.

Congress wisely recognized the severity and magnitude of these diseases when it created a separate National Institute of Arthritis, Muculoskeletal, and Skin Diseases. This new institute, with the help of this subcommittee, at long last will provide an opportunity for a highly focused research program. For although much has been learned about the symptoms and the progress of these diseases and disorders and their management, medical science has yet to discover cures for many of them.

Research Needs

Osteoarthritis, the most common form of arthritis, afflicts 16 million Americans, and remains a leading cause of pain and disability. The disease mainly affects the cartilage of the joint causing it to fray, crack, ulcerate, and erode, resulting in an uncushioned bone-on-bone joint.

Research indicates that osteoarthritis may not necessarily be a wear-and-tear disease nor an inevitable consequence of aging. There appears to be important chemical differences between osteoarthritis and aging cartilage.

Moreover, advances in biotechnology are setting the stage for future research. New studies on the reactivity of cartilage cells and biochemical and ultrastructure changes in cartilage are providing new leads as to the causes of this crippling disease.

The proceedings of a major scientific workshop on causative mechanisms of osteoarthritis have recently been published. The report delineates over 100 specific recommendations for osteoarthritis research. I am proud that the American Academy of Orthopaedic Surgeons cosponsored this workshop with the National Institutes of Health.

Rheumatoid Arthritis remains a major crippling disorder among the rheumatic diseases. The findings from research over the past few years seem to indicate that rheumatoid arthritis does not result solely from a single microorganism or a deranged host factor, but rather by different agents generating immune responses that later lead to chronic inflammation in those with genetically determined abnormal immune regulation and biochemical abnormalities.

Many new basic research methodologies can now be used in finite experiments to test this and other hypotheses. These new technologies include monoclonal antibodies, recombinant DNA, and molecular biology. In addition, new experimental animal models have been developed, such as that induced by immunization with type II collagen.

Mr. Chairman, this search for agents involved in an infectious etiology for arthritis needs to be continued. It should include viruses and other latent or slow-acting microorganisms. Because immunological factors play such a major role in causing joint inflammation in rheumatoid arthritis, methods need to be developed for selective and specific suppression of those immune responses that mediate such conditions, but do not obliterate the body's defense against infections. The structure, function, and release of the mediators of inflammation, and the processes by which inflammation causes damage to joints and other tissues, must be better understood at the molecular level.

Bone Research. Research advances have also been made in understanding bone cell regulatory factors, and support for this work, along with initial studies in clinical application of these new developments, should go forward. The continuous remodeling of bone is a complex, multifactorial process.

Several controlling proteins recently have been identified and isolated. These new leads should be pursued.

Osteoporosis. The diminished bone density associated with osteoporosis is an important cause of bone weakening. This makes osteoporosis a major risk factor for fractures of the hip, spine, and pelvis in the elderly.

The incidence of osteoporosis increases dramatically with age and women are much frequently affected than men. A study of a group of Michigan women aged 45 and older showed that more than half had evidence of osteoporosis by x-ray exam. After 75 years of age, osteoporosis can be demonstrated in nine out of 10 women. About 70 percent of all fractures occurring in women older than 45 are related to osteoporosis.

Researchers are now learning more about the importance of estrogen, calcium, and exercise in osteoporosis. Studies are needed to more fully discern the role of hormones, nutrition, and exercise in treating and preventing this serious disorder.

Specialized Centers of Research

Mr. Chairman, I want to express the gratitude of the Academy to this Committee for including funds in the 1987 Appropriations for nine Specialized Centers of Research. These centers provide a highly effective means of concentrating basic and clinical research efforts on high priority diseases such as osteoarthtiris, rheumatoid arthritis, and osteoporosis. Through this mechanism one can expect to see rapid translations of advances in the basic sciences into clinical application.

There is great enthusiasm in the musculoskeletal research community for the Centers, and again we thank you for your confidence and support.

The investment of government funds in biomedical research over the past three decades has resulted in a substantial payoff to the taxpayer and, more importantly, to those individuals afflicted with musculoskeletal diseases.

Mr. Chairman, research remains the lifeline of improved patient care. Each new bit of information, added to the previously existing scientific data base, contributes to clinical advances and the alleviation of human suffering.

Treatment of musculoskeletal diseases has dramatically changed over the past 15 years, as a result of improved knowledge of the basic nature, causes and natural history of the disease processes. New technology involving diagnostic and treatment modalities has greatly improved the results in people suffering from afflictions of the musculoskeletal system.

Mr. Chairman, the President's budget for 1988 -- not to mention his attempts at revising the 1987 budget -- does not meet the needs of biomedical research. The efforts of this committee to maintain the momentum in science and its attempts to bring hope to those individuals suffering from disease, are severely cut short in the 1988 budget.

While we fully appreciate the difficult fiscal conditions under which you are operating, we believe, like Emerson, that "Health is the first wealth," and thus the government must provide for the sound health of its citizens today and into the future.

With this in mind, we respectfully urge this committee to provide $196 million for the National Institute of Arthritis, Musculoskeletal, and Skin Diseases.

It should be noted that the Academy does not support the President's request to provide forward funding for non-competing grants.

On behalf of the over 11,000 members of the American Academy of Orthopaedic Surgeons, thank you for your past support and for giving me this opportunity to testify before you today.

STATEMENT OF MYRON GENEL, M.D., YALE UNIVERSITY SCHOOL OF MEDICINE

Senator PROXMIRE. Next is Dr. Genel of the Yale University School of Medicine.

We apologize, Doctor. We called your name earlier and you apparently were out of the room. That is the reason you did not appear in the order you should have.

Dr. GENEL. Well, Senator, I had a call of nature and misjudged the program.

Senator PROXMIRE. That is understandable.

Dr. GENEL. Well, I think I would prefer to be either first or last, and, since I could not be first, I would just as soon be last.

Senator PROXMIRE. Well, you are the grand finale today.

Dr. GENEL. You know, I believe we used to run on opposite sides of Connecticut Avenue.

Senator PROXMIRE. Oh, do you run on the other side of the street?

Dr. GENEL. You were running toward the Hill and I think I was running on the opposite side.

Senator PROXMIRE. Well, very good.

Dr. GENEL. You were at about an 8-minute mile, if I calculate it correctly.

Senator PROXMIRE. Well, I used to be able to do a 7-minute mile, but those days are gone forever. I am lucky if I can run at all. I have a bad knee.

Go ahead, sir.

Dr. GENEL. Mr. Chairman, I am Myron Genel, professor of pediatrics and associate dean, Yale University School of Medicine.

Senator PROXMIRE. We are both Elis, incidentally. I am a Yale man, too.

Dr. GENEL. I bring you greetings from our president.

Senator PROXMIRE. Thank you.

Dr. GENEL. Today I represent the American Pediatric Society, the Association of Medical School Pediatric Department Chairmen, and the Society for Pediatric Research. I serve as chairman of the societies' Public Policy Council.

These organizations represent researchers, the faculty of medical and research facilities, and the leaders of all U.S. medical school pediatric departments.

My remarks will address recent achievements in pediatric research and will emphasize appropriate funding for the overall Federal biomedical research program, as you have heard from others, but will stress provision of adequate support for two vital programs essential for pediatric research: the National Institute of Child Health and Human Development and the General Clinical Research Centers Program in the Division of Research Resources.

A substantial portion of research relevant to diseases affecting children is supported by the NICHD, including, of note, the recent development of an improved, purer, pertussis vaccine through genetic engineering procedures.

This vaccine offers the promise of eradicating the serious, unintended injuries which occur with the present vaccine and which have led to the current vaccine liability crisis, but requires provision of funds for appropriate clinical trials, which already have been designed.

On the important public issue of low birth weight and high infant mortality, NICHD has also established a variety of programs and created two extramural networks to find means of prevention through improved maternal care and improved therapeutic techniques of neonatal care.

All of these are public health issues for which the Congress has repeatedly indicated its concern.

However, funding for this Institute has not been maintained at a level proportionate to the rest of NIH. Thus, for fiscal year 1986, NICHD funded only 27 percent of grants approved by the primary study sections. This compares to the overall figure of 36 percent for NIH, and up to 51 percent for other Institutes. I heard testimony here this afternoon that decried the problem of only funding 50 percent of approved grants.

So I would remind you that NICHD is funding at a level of 27 percent.

While we completely support the recommendations of the ad hoc group for medical research funding of $7.452 billion for NIH for fiscal year 1988, I urge Congress to back up words with deeds and provide some measure of equity within the various programs of NIH by providing sufficient funds to permit NICHD to approve and to fund grants at a level comparable to the rest of NIH.

We, thus, join with the Academy of Pediatrics in recommending a funding level of $497 million for NICHD for fiscal year 1988.

I also urge you to provide means to permit the Institute, in recognition of not only its significant contributions to child health, but in celebration of its 25th anniversary, to gather its dispersed intramural program into a much needed building, one which will also house up-to-date animal facilities for the entire campus.

Finally, as a former program director of the Children's Clinical Research Center at Yale, I also urge your support for increased funding for the General Clinical Research Centers [GCRC] Program. I will not regale you with the rationale for this, but would only remind you that we support the recommendation of the AFCR for an appropriation of $116 million for the GCRC Program.

PREPARED STATEMENT

Mr. Chairman, I have submitted a more detailed statement for the record. This includes further recommendations on funding for development of pediatric physician-scientists, for ADAMHA and for primary care training programs.

[The statement follows:]

STATEMENT OF MYRON GENEL

Mr. Chairman, I am Dr. Myron Genel, professor of pediatrics, Yale University School of Medicine and chairman of this joint Public Policy Council. Today I represent the American Pediatric Society, the Association of Medical School Pediatric Department Chairmen, and the Society for Pediatric Research in my capacity as a member of the Public Policy Council. These organizations represent pediatric researchers, the faculty of medical and research facilities, and the leaders of all U.S. medical school pediatric departments. Membership in the American Pediatric Society and the Society for Pediatric Research is conferred on the basis of scholarship, research, and contributions to pediatric education.

Those of us dedicated to the advancement of medicine through research and training are proud of the achievements of pediatric research. We are proud because the beneficiaries of such research are not my colleagues, but they are the infants and children who survive acute and chronic illnesses to become productive adults. Our statement will highlight only a few of the ways in which the lives of our children have been improved.

The causes and prevention of infant mortality and morbidity remain a high priority for researchers. Various institutes at the National Institutes of Health (NIH) are funding investigations to solve this complex problem. Research is under way to improve pregnancy outcome by studying intrauterine growth retardation, premature labor, respiratory distress syndrome, pregnancy of a diabetic mother, intrauterine infections, hypertension, nutrition, and AIDS. The National Institute of Child Health and Human Development (NICHD) launched two major collaborative networks this past year which should provide valuable information for the control of infant mortality and morbidity. One network focuses on maternal-fetal medicine and one on neonatal intensive care. These networks are to provide arenas to develop and test new therapeutic and preventive techniques. It is hoped these networks and the results they provide will allow for the integration of new therapies more quickly than is now possible.

The treatment and management of cystic fibrosis and diabetes in children are also two accomplishments of which the NIH can be proud. Once a fatal disease of childhood, cystic fibrosis victims now can expect to live into the teens, twenties, or longer. Even though the basic cause is still unknown, recent discovery of three markers of the cystic fibrosis gene give researchers hope that there will be a time when science can intervene in the disease process and prevent the development of the disease.

With proper management, diabetes patients can now live a near-normal life without the threat of the long-term illness and disability this disease can cause. Attempts to transplant insulin-producing cells into patients show promising results which will further increase the normalcy of a diabetic's life.

A major concern of the past several years has been the unanticipated injuries which occur with the administration of some vaccines. This concern led to increased activity to find a vaccine for pertussis which would have less adverse reactions than the existing vaccine. Through genetic engineering, a vaccine has been developed which promises to be more effective as well as safer. The time has come to begin field trials of this vaccine, which have been started in Sweden and will soon begin in Massachusetts. Excitement at NICHD over this news is tempered by the high financial costs of such trials. Testing will cost about $4 million this year and the trials will last 2-3 years. The money to test this vaccine must come from somewhere, and the choice should not be to fund this at the expense of other, equally vital, activities.

Congress must be cognizant of the fact that most pediatric research funds come from the federal government, namely the National Institutes of Health. This research, in the aggregate, is estimated to represent less than ten percent of all research being funded through NIH. Considering this as an investment in the future of the nation, a much-needed long-term investment, perhaps more emphasis should be places on pediatrics. With the diverse activities, and with the funding being insecure, there is a compelling need for an in-depth study of pediatric research being supported by federal agencies, including NIH. This would provide a clear picture of what is currently being studied, where there are gaps, how the research is being translated into improved pediatric practice and improved child health, and where future research should be focused.

The importance of the General Clinical Research Centers (GCRC) program of the Division of Research Resources and its effect on pediatrics must be emphasized. Pediatric research places particular emphasis on clinical research providing the promise of direct benefit for infants and children. There are 14 centers devoted primarily, if not exclusively, to pediatric clinical research. The GCRC clinical associate physician program is a primary source for training physician investigators and approximately one-third of its graduates have been pediatricians. Funding for this important program, promoted through NIH's Division of Research Resources, has been relatively constant since FY85, notwithstanding a 2.4 percent Gramm-Rudman-Hollings cut invoked in FY86. Thus the program has had to depend on third-party offsetting revenues for clinical care -- a mechanism which is rapidly vanishing in our cost-conscious climate. Therefore, it is essential that adequate federal funding be provided to bring this program to a services level equivalent to FY85. The best professional judgement of the association of GCRC program directors, who operate these centers, is that this would require an appropriation of $116 million, assuming third-party recovery of an additional $9 million. Our societies concur with this recommendation and strongly urge this Committee to indicate its support for the GCRC program by requesting NIH to provide an increase to this program.

We feel that adequate provision for research training, both individual and institutional programs, is essential for the development of the next generation of basic science and clinical investigators. NICHD, in cooperation with the Association of Medical School Pediatric Department Chairmen, now sponsors promising young physician investigators as part of its total research career training program. This collaboration between an association and federal government has expanded the ability of NICHD to train new researchers. NICHD hopes to sponsor five trainees through this program during this year and five more for next year. The level and distribution of training funds supplied by the federal government should be maintained at a level which will achieve a stable and efficient system. Directives contained within the appropriations report whould encourage Institutes to increase the allocation of funds for research career training.

The American Pediatric Society, the Association of Medical School Pediatric Department Chairmen, and the Society for Pediatric Research recommend for fiscal year 1988 that the funding for NIH reflect the need for program balance, the recognition of pediatric research, and to train qualified investigators. To this end we join with the Ad Hoc Group for Medical Research Funding in recommending $7.452 billion for the next fiscal year.

When considering medical research programs, Congress should also remember the critical role the Alcohol, Drug Abuse and Mental Health Administration plays in solving the health problems of today. This agency funds multi-faceted biomedical, behavioral and developmental research activities, attacks the increasingly serious problem of substance abuse, trains investigators, and assists the transfer of life-prolonging clinical knowledge and technology to the general public. With today's emphasis on educating our young population on the risks of substance use and abuse, many of the new programs designed by ADAMHA are of particular importance to pediatrics. These efforts must be maintained. We join our colleagues in recommending $590 million for this Administration's research and training components.

Congress created the Primary Care Training program to promote the graduate education of physicians specifically trained for the practice of primary care pediatrics. When one acknowledges that a child's or adolescent's well-being encompasses his health, his behavior, his society, and his nutrition, the care of children and adolescents is more than acute illnesses or specialty treatment. Their health depends on a physician who has been trained to treat the social and behavioral ills as well as the medical. Practitioners who have been trained through this program become general pediatricians rather than seeking further specialization. The program directors at the training institutions feel the entire curricula has been improved by the addition of faculty and studies devoted to behavioral and psychosocial medicine as well as by the increased development of ambulatory and community-based clinics affiliated with the training institution.

Unfortunately, primary care residency programs have enormous difficulty in obtaining the financial support they need to train primary care physicians. Since training programs for the most cost-effective form of health care delivery -- primary care -- cannot achieve even inadequate financial support, federal support is essential to allow quality primary care education to continue. Therefore, our organizations recommend that funding for Title VII, primary care training grants for general pediatrics and internal medicine be kept at the current level of $18.5 million.

Mr. Chairman, in summary, the American Pediatric Society, the Association of Medical School Pediatric Department Chairmen, and the Society for Pediatric Research wish to state once again that we are mindful of the difficult decisions which you, as members of Congress, face each day. We thank you for the opportunity to appear before you and urge that you remember the vital work being funded through the federal government for pediatric biomedical research.

Senator PROXMIRE. Dr. Genel, unfortunately I have to run. That is a fine statement and I would like to ask you just one question.

On page 3 of your written testimony, you refer to the loss of funding, and I quote now from "third-party offsetting revenues for clinical care."

Would you please give an example of that kind of third-party funding and the reason this source of revenue is dwindling.

Dr. GENEL. For many years, the clinical research programs of the GCRC were supported by charging third-parties for patients that were housed in our centers, who were housed for research, but who also required medical care for a condition.

So, for example, when I would evaluate a child for a possible growth hormone deficiency and would admit him for studies, it was not inappropriate to charge the third-party insurer for his care, as well as to charge the research center for those portions of his care which were researched.

This permitted us to extend the operations of our research center and save money for the Federal budget.

That option is less and less available to us, as third-party insurers are more rigorously assessing their payments.

This is especially true with the DRG system, which has been implemented by Medicare, which means that patients are remaining in hospitals for shorter periods of time. More than that, the incentives are such that patients are appropriately not hospitalized but are maintained outside of the hospital, which means that the research centers' program does not have these third-party reimbursable funds to extend the use of its program.

Senator PROXMIRE. Thank you, sir. Thank you very much for your fine testimony.

I apologize once again for delaying you. You did an excellent job.

Dr. GENEL. That is quite all right. Thank you, Mr. Chairman.

SUBCOMMITTEE RECESS

Senator PROXMIRE. The subcommittee will stand in recess until 9:30 tomorrow morning, when we will hear witnesses for NIH, OASH, and NCFA.

[Whereupon, at 5:13 p.m., Wednesday, May 6, the subcommittee was recessed, to reconvene at 9:30 a.m., Thursday, May 7.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

Page
Albert, Roy E., M.D., Environmental Health Sciences Center, University of Cincinnati Medical Center, Cincinnati, OH, on behalf of Association of University and Environmental Health Sciences Centers 827
  Prepared statement 829
Alford, Bobby R., M.D., National Committee for Research in Neurological and Communicative Disorders 791
  Biography of 797
  Prepared statement 793

Bailey, Laura, Maine Diabetes Control Project, Winthrop, ME 275
  Prepared statement 286
Barker, Dr. Lewellys F., senior vice president, American Red Cross 292
  Prepared statement 293
Bassage, Diane DeRoos, American Dental Hygienists' Association 680
  Prepared statement 682
Bates, R.T., chairman, Railway Labor Executives' Association, Committee on Railroad Retirement 431
  Prepared statement 432
Baumeister, Alfred A., Vanderbilt University, in behalf of American Association on Mental Deficiency, American Academy on Mental Retardation, American Psychological Association 870
  Prepared statement 872
Bellanti, Jacqueline, chair, National Coalition on Immune System Disorders 755
  Prepared statement 757
Bellino, Carmen, American Liver Foundation 692
  Prepared statement 702
Benjamin, Stanley B., M.D., Georgetown University Hospital, American Society for Gastrointestinal Endoscopy 692
  Prepared statement 696
Benson, Robby, American Heart Association 76
Bikales, Gerda, executive director, U.S.English 475
  Prepared statement 476
Bloom, Dr. Barry R., president, Federation of American Societies for Experimental Biology 329
  Prepared statement 331
Bodor, Dr. Nicholas, graduate research professor, College of Pharmacy, University of Florida, Gainesville, FL 240
  Prepared statement 242
Bowman, Dr. Marjorie, the Society of Teachers of Family Medicine 171
  Prepared statement 173
Brooks, Pauline H., Children's Television Workshop 577
  Prepared statement 578
Brown, Larry, Deafness Research Foundation 784

Page
Cannon, Lynne, president, Association for Children and Adults With Learning Disabilities, Inc. 413
  Prepared statement 415
Caranasos, George J., M.D., University of Florida College of Medicine, Society for Research and Education in Primary Care Internal Medicine 192
  Prepared statement 195
Carpenter, David R., chairman of the board of directors, Alliance for Aging Research, presented by Daniel Perry, executive director, Alliance for Aging Research 901
  Prepared statement 903
Casteen, Dr. John, president, University of Connecticut, on behalf of American Council on Education 477
  Prepared statement 479
Cazzetta, Ralph, Cooley's Anemia Foundation, Inc. 653
Clark, Charles M., M.D., chairman, National Diabetes Advisory Board 733
  Prepared statement 735
Colwell, John A., American Diabetes Association 686
  Prepared statement 688
Conlan, Robert J., National Peace Institute Foundation 601
  Prepared statement 602
Cooke, Eileen D., American Library Association 552
  Prepared statement 554
Cooper, Reginald, M.D., president, American Academy of Orthopaedic Surgeons 929
  Prepared statement 930
Cornett, C. Bruce, president, Interstate Conference of Employment Security Agencies, Inc. and director, Missouri Division of Employment Security 106
  Prepared statement 109
Cowley, R. Adams, M.D., director, Charles McC. Mathias National Study Center and Emergency Medical Systems, prepared statement 255

Daschle, Hon. Thomas A., U.S. Senator from South Dakota 411
  Prepared statement 412
Davis, Alan C., chairman, Coalition on Smoking OR Health 257
  Prepared statement 259
Davis, Dr. Pamela Bowes, cochairman, public policy committee, American Federation for Clinical Research 911
  Prepared statement 913
Deeb, Dr. Larry C. 275
  Prepared statement 278
Dolan, Dr. Terrence R., chairperson, American Association of University Affiliated Programs 359
  Prepared statement 361
Downs, Thomas M., city administrator/deputy mayor for operations for the District of Columbia 36
  Prepared statement 38
Dreher, Dr. Melanie C., dean, University of Miami School of Nursing 245
  Prepared statement 247
Dressing, Robert, president, Cystic Fibrosis Foundation 660
  Prepared statement 662
Dutra, Craig, senior advisor on human services, on behalf of Hon. Raymond Flynn, mayor, Boston, MA 28
  Prepared statement 30
de Lugo, Hon. Ron, Delegate, the Virgin Islands 47
  Letter from 54
  Prepared statement 49

Page
Engel, Gertrude, health advocate, American Health Education Foundation 814
Prepared statement 816
Exon, Hon. J. James, U.S. Senator from Nebraska 407
Prepared statement 409

Falek, Dr. Arthur, professor of psychiatry, Emory University School of Medicine 233
Prepared statement 236
Fannon, Peter M., National Association of Public Television Stations 582
Prepared statement 584
Farrar, John T., M.D., president, Digestive Disease National Coalition, American Gastroenterological Association 692
Prepared statement 693
Filerman, Dr. Gary, president, Association of University Programs in Health Administration 177
Forrest, Jacqueline Darroch, director of research, Alan Guttmacher Institute 877
Prepared statement 879
Fournier, Dr. Arthur M., director, area health education centers program, University of Miami School of Medicine, Miami, FL 126
Fox, Geraldine, Deafness Research Foundation 784
Prepared statement 786

Garduque, Dr. Laurie, American Educational Research Association 571
Prepared statement 573
Genel, Myron, M.D., Yale University School of Medicine 936
Prepared statement 938
Genensky, Samuel M., Ph.D., executive director, the Center for the Partially Sighted, Santa Monica, CA 884
Prepared statement 886
Gillenwater, Jay Y., M.D., American Urological Association 744
Prepared statement 746
Giordano, Vivian, member, Thalassemia Group, Cooley's Anemia Foundation, prepared statement 655
Goldstein, Jerome C., M.D., F.A.C.S., executive vice president, American Academy of Otolaryngology—Head and Neck Surgery 800
Prepared statement 801
Gorn, Morton, president, Remington Management Co 825
Prepared statement 826
Gossett, Milton, the Lasker Foundation 334
Prepared statement 337
Grace, Dr. Marcellus, dean, Xavier University College of Pharmacy, New Orleans, LA 227
Prepared statement 229
Graven, Stanley N., M.D., March of Dimes Birth Defects Foundation 853
Prepared statement 855
Guilinger, James, president, American Vocational Association 396
Prepared statement 398

Hamerman, Warren J., chairman, National Democratic Policy Committee 90
Prepared statement 93
Handson, Chet, deputy director, National Center for Research in Vocational Education 505
Hansen, Dr. Barbara C., vice chancellor for graduate studies and research, University of Maryland 341
Prepared statement 343
Harbison, Paula, M.D., Interstitial Cystitis Association 722
Prepared statement 725
Harootyan, Linda Krogh, MSW, director of information, the Gerontological Society of America 895
Prepared statement 897

Page

Hoffheimer, Lawrence S., National Committee for Research in Neurological and Communicative Disorders 791
Hoyer, Leon W., M.D, National Hemophilia Foundation 642
  Prepared statement 644
Huntington, Charles G., American Academy of Physician Assistants 186
  Prepared statement 188

Jacobson, Trudy, on behalf of the Epilepsy Foundation of America, Landover, MD 802
  Prepared statement 805
Jordan, Larry S., president, National Association of State Emergency Medical Services Directors, prepared statement 211

Kanahele, Kamaki III, Office of Hawaiian Affairs, State of Hawaii, prepared statement 24
Kass, Edward H., Infectious Disease Society of America 750
  Prepared statement 752
Kelley, William N., M.D., president, American Rheumatism Association 907
  Prepared statement 909
Klocke, Francis J., M.D., American College of Cardiology 615
  Prepared statement 617
Kolb, Dr. Marvin O., American Academy of Pediatrics 146
  Prepared statement 148

Lamar, Newton, Indian and Native American Employment and Training Coalition 113
Legler, Donald W., American Association for Dental Research 674
  Prepared statement 676
Levi, Jeffrey, National Gay and Lesbian Task Force 761
  Prepared statement 763
Lewis, Dr. Henry, associate dean, Florida A&M University, College of Pharmacy, Tallahassee, FL 215
  Prepared statement 219
Lockhart, Dean Madelyn L., dean of graduate studies, University of Florida, Gainesville, Association of American Universities and National Associate of State Universities and Land-Grant Colleges 540
  Prepared statement 542
Lyons, Dr. James E., president, Bowie State College, on behalf of American Association of State Colleges and Universities 515
  Prepared statement 517

Mahoney, Jean, Planned Parenthood Federation of America 864
  Prepared statement 866
Mankin, Henry J., M.D., member, National Arthritis Advisory Board 917
  Prepared statement 919
Marinelli, Joseph J., associate superintendent for planning and governmental relations, Orange County Public Schools, Orlando, FL 440
  Prepared statement 443
Matia, Barbara, Scottsdale, AZ 923
  Prepared statement 925
Matsunaga, Hon. Spark, U.S. Senator from Hawaii 767
  Prepared statement 769
Mayer, Dr. Eugene S., director, North Carolina Area Health Education Centers Program 126
  Prepared statement 129
McCarter, Katherine, vice president, Coalition for Health Funding, prepared statement 319
McEntee, E.P., on behalf of the Railway Labor Executives' Association, Committee on the Railway Labor Act 431
McFarren, Ann E., executive director, AIDS Action Council 305
  Prepared statement 307

Page
McHenry, William E., Ph.D., the National Alliance for Minority Graduate and Professional Education 534
Prepared statement 536
McKenna, Dr. Robert, past president, American Cancer Society, and cochairman, National Public Issues Committee 391
Prepared statement 393
McMahon, Audrey R., chairman, Scientific Studies Committee, the Association for Children and Adults With Learning Disabilities 882
Prepared statement 883
McNevin, Anthony, American Association of Colleges of Podiatric Medicine 179
Prepared statement 182
Melley, Kenneth F., director, Government relations, National Education Association 422
Prepared statement 423
Melson, Judith, certified nurse-midwives, American College of Nurse-Midwives 151
Prepared statement 153
Michael, Jerrold M., Sc.D., Ph.D., dean and professor of public health, University of Hawaii 9
Prepared statement 12
Miller, Jill, executive director, Displaced Homemakers Network 119
Prepared statement 122
Miller, Winford, migrant school record transfer system, Arkansas Department of Education 468
Prepared statement 470
Mingo, Dr. G.W., director, Student Support Services and Upward Bound Program 546
Prepared statement 548
Mitler, Merrill M., Ph.D., chairman, Governmental Affairs Committee of the Association of Professional Sleep Societies 809
Prepared statement 811
Modica, Charles R., St. Georges University School of Medicine 140
Prepared statement 143
Monaco, Grace Powers, national liaison chairman, Metropolitan Washington Area Candlelighters 367
Prepared statement 369
Moore, Mary Tyler, international chairman, Juvenile Diabetes Foundation 67
Prepared statement 70
Morin, Dr. Stephen F., Society for the Psychological Study of Lesbian and Gay Issues 297
Prepared statement 299
Mulvihill, James E., vice president for health affairs, University of Connecticut Health Center, American Dental Association 667
Prepared statement 669
Munzer, Alfred, M.D., American Lung Association 610
Prepared statement 611
Myers, Frank W., D.O., American Association of Colleges of Osteopathic Medicine 134
Prepared statement 136

Norton, Edward W.D., M.D., Rascom Palmer Eye Institute, Miami, FL, and chairman, department of ophthalmology, University of Miami School of Medicine 818
Prepared statement 820
Null, Dr. Cynthia H., executive director, Federation of Behavioral, Psychological, and Cognitive Sciences 353
Prepared statement 355

Page

Oglesby, James R., vice president, National School Boards Association 451
Prepared statement 452
Olson, Shirley, National Military Family Association 485
Prepared statement 487
Owens, Dr. Albert H., Jr., chairman, public issues committee, American Society of Clinical Oncology, and president, Johns Hopkins Hospital, Baltimore, MD 373
Prepared statement 375

Petersdorf, Dr. Robert G., president, Association of American Medical Colleges 323
Prepared statement 325
Pierce, William F., executive director, Council of Chief State School Officers 456
Prepared statement 458
Pollard, Dr. Thomas, National Coalition for Science and Technology 347
Prepared statement 349
Potter, Dr. John F., president, Association of American Cancer Institutes, and director, Vincent T. Lombardi Cancer Research Center 378
Prepared statement 386
Preston, Mary J., legislative director, United States Student Association 520
Prepared statement 522

Rettig, Paul, vice president, Health Industry Manufacturers Association 594
Prepared statement 595
Richardson, Anne, chairman of the board, Reading is Fundamental, Inc 499
Prepared statement 501
Rider, J. Alfred, M.D., president, Children's Brain Diseases 771
Prepared statement 773
Ripp, Andrew M., vice president, International Brotherhood of Electrical Workers, and member, Railway Labor Executives' Association, prepared statement 434
Robbins, Dr. Anthony, American Public Health Association 311
Prepared statement 313
Rogers, Terence A., Ph.D., dean, John A. Burns School of Medicine, University of Hawaii at Manoa 17
Prepared statement 18
Romansky, Michael, Esq., counsel to Juvenile Diabetes Foundation 67
Root, Nina J., chairwomen, department of library services, American Museum of Natural History, prepared statement 560
Ryan, Dr. Ray D., executive director, National Center for Research in Vocational Education 505
Prepared statement 507

Schreiber, Alan, M.D., American College of Hematology 634
Prepared statement 636
Selser, Josh 686
Shine, Dr. Kenneth, dean, UCLA School of Medicine and president, American Heart Association 76
Prepared statement 79
Silver, Howard J., associate director for Government relations, Consortium of Social Science Associations 563
Prepared statement 565
Skare, John D., executive director, National Student Roundtable 529
Prepared statement 531
Smith, Lee, M.D., American Society of Colon and Rectal Surgeons 692
Prepared statement 700
Snyder, James R., national legislative director, Railway Labor Executives' Association 431
Soffer, Alfred, M.D., executive director, American College of Chest Physicians 626
Prepared statement 628
Starr, Alfred L., executive director, Seattle-King County Private Industry Council 85
Prepared statement 87

Page

Stone, Betsey, executive director, Tri-County Community Medical Center, Greenville, FL, National Association of Community Health Centers, Inc. 200
Prepared statement 204
Stowe, Steven P., M.D., American College of Gastroenterology 692
Prepared statement 703

Taylor, Robert H., M.D., the American Academy of Family Physicians 161
Prepared statement 163
Teitelbaum, Michael, D.Phil., chairman, public affairs committee, Population Association of America, prepared statement 860
Teter, Harry, Jr., director, Atlantic Emergency Medical Services Council 252
Prepared statement 254
Thames, T. Brian, M.D 161
Thompson, Myron "Pinky", Kamehameha Schools Bishop Estate 1
Prepared statement 4
Thurmond, Hon. Strom, U.S. Senator from South Carolina, letters from 815, 816
Tiger, Winifred, education director, Seminole Tribe of Florida, prepared statement 116
Tornello, Pat, on behalf of the American Federation of Teachers 416
Prepared statement 418
Tsangaris, Chris 653

Ultmann, Dr. John, chairman, National Coalition for Cancer Research, prepared statement 379
Urquhart, Michael, president, Local 12, American Federation of Government Workers, AFL-CIO 100
Prepared statement 103

Vaughn, E. Darracott, M.D., Intersociety Council for Research of the Kidney and Urinary Tract 740
Prepared statement 741

Walker, Charles A., Ph.D., chancellor, the University of Arkansas at Pine Bluff 538
Prepared statement 539
Wartman, Judith, director, Associated Natural Science Institutions 559
Washington, Dr. Robert, commissioner of mental health for Washington, DC 36
Wertheimer, Wendy, director of public and Government affairs, American Social Health Association 262
Prepared statement 264
White, Patience, M.D., Arthritis Foundation 848
Prepared statement 850
Wilson, Donald E., M.D., chairman, National Digestive Diseases Advisory Board 692
Prepared statement 710
Wolfe, Leslie R., chair, National Coalition for Women and Girls in Education 491
Prepared statement 493
Wood, Dr. Francis C., Jr., chairman, Advisory Committee of the Washington State Diabetes Control Program 275
Prepared statement 282

Zucker, Dr. Stephen B., director, area health education centers program, Southeastern College of Osteopathic Medicine, Miami, FL 126

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